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The Resources Agency

Department of Water Resources

BULLETIN No. 69-71

CALIFORNIA HIGH WATER
1970-1971

SEPTEMBER 1972

NORMAN B. LIVERMORE, JR.
Secretary for Resources
The Resources Agency

RONALD REAGAN
Governor
State of California

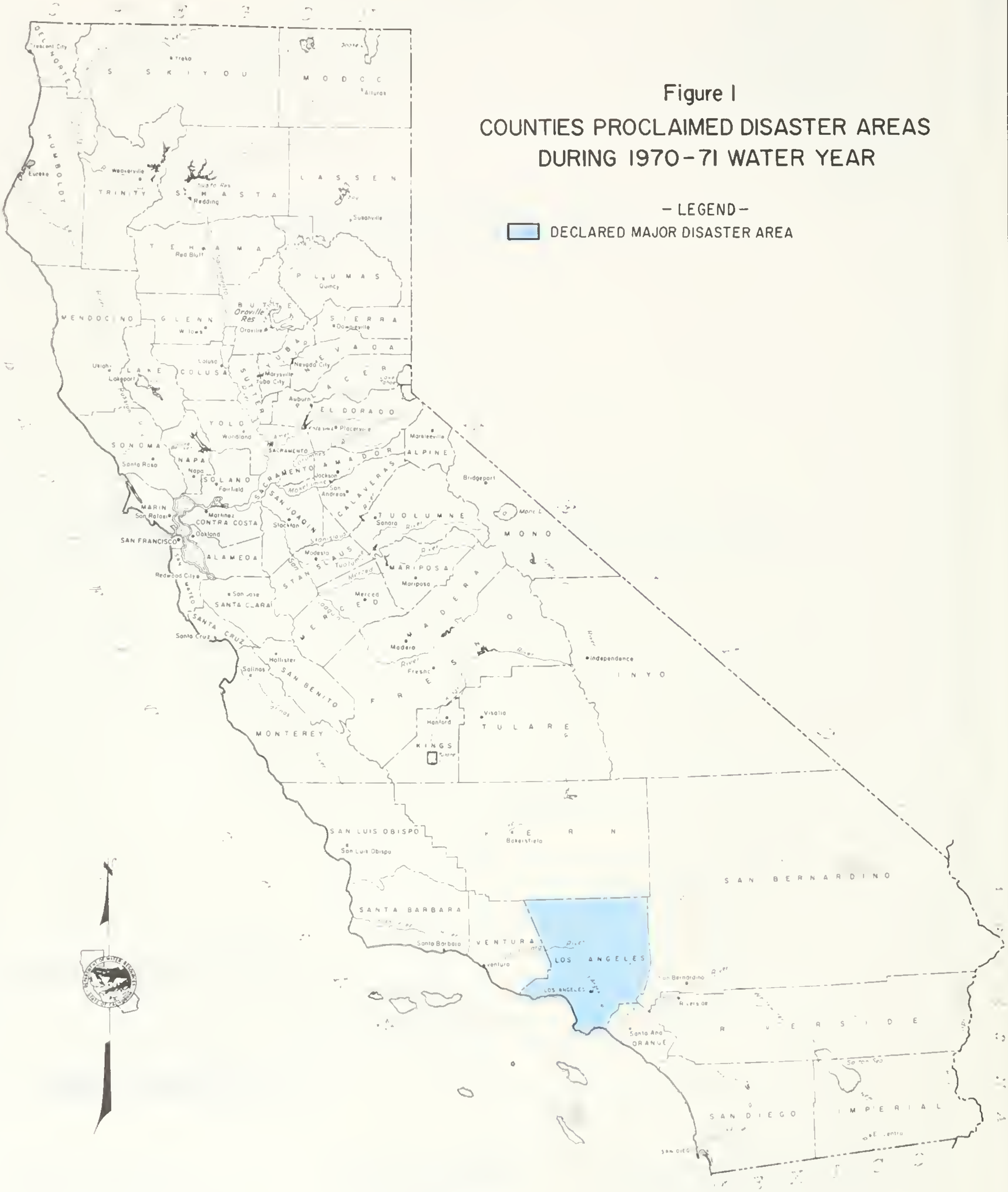
WILLIAM R. GIANELLI
Director
Department of Water Resources

Figure I

COUNTIES PROCLAIMED DISASTER AREAS DURING 1970-71 WATER YEAR

- LEGEND -

DECLARED MAJOR DISASTER AREA



State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

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FOREWORD

Bulletin No. 69-71, the ninth of an annual series, describes the general weather patterns preceding and during the storm periods of the 1970-71 water year, precipitation characteristics, and the resulting runoff; and presents information on flooded areas. It also includes tabulations of precipitation comparisons and peak streamflows and stages; hydrographs of streamflow and reservoir operations; and weir overflow graphs.

Data for this bulletin were supplied by the National Weather Service, the U. S. Geological Survey, the U. S. Army Corps of Engineers, the U. S. Bureau of Reclamation, and many other agencies, both public and private. Their cooperation is gratefully acknowledged.

William R. Gianelli

William R. Gianelli, Director
Department of Water Resources
The Resources Agency
State of California
August 17, 1972

ABSTRACT

The weather pattern for water year 1970-71 was marked by extremes that set several weather records. The year held the wettest November for San Francisco and Stockton, the longest winter drought at Red Bluff, the heaviest 24-hour rainfall in southern California, and the deepest snowpack at Norden in December and January.

The Flood Operations Center was activated on a 24-hour basis from November 28 through December 29, 1970, and again from January 15 to 20, 1971. No major emergencies arose and the Center had to take no special action.

The completion of two new dams this year is expected to ease future flood control operations. Bullards Bar Dam on the North Fork of the Yuba River and New Don Pedro Dam on the Tuolumne River will reduce floods.

A series of storms hit the North Coastal Hydrographic Area from October through December, causing flood stages on some rivers. A winter drought occurred from mid-January to early March. A new series of storms moved in during March. No major high water damage was experienced in the area.

The San Francisco Bay Hydrographic Area was drenched by November storms that dropped almost three inches of rain on San Francisco and more than four inches of rain on Marin County in one two-day period. Heavy local runoff resulted in both areas, with the Napa River near St. Helena rising nine feet in nine hours. No streams exceeded flood stage. The rest of the water year was marked by a midwinter drought, a wet spring, and intense summer temperatures.

The Central Valley Hydrographic Area had light precipitation early in the water year. November and December were very wet months, and large amounts of snow were deposited in the Sierra Nevada in December. The Central Valley had little rain from January to March, when a new series of storms brought heavy rain to the mountains. Both Shasta and Oroville Reservoirs prevented downstream flooding. Low releases kept river stages low.

The water year in the South Coastal Hydrographic Area was preceded by brush and grass fires that denuded vast acreages and created a mudslide hazard. Torrential rains in November and December 1970 did cause mud slides and flooding throughout the area and heavy snows closed a major highway. January was a dry month. In February a severe earthquake centered in San Fernando Valley extensively damaged the Upper and Lower San Fernando Dams; 80,000 valley residents were evacuated until the lower reservoir was drained.

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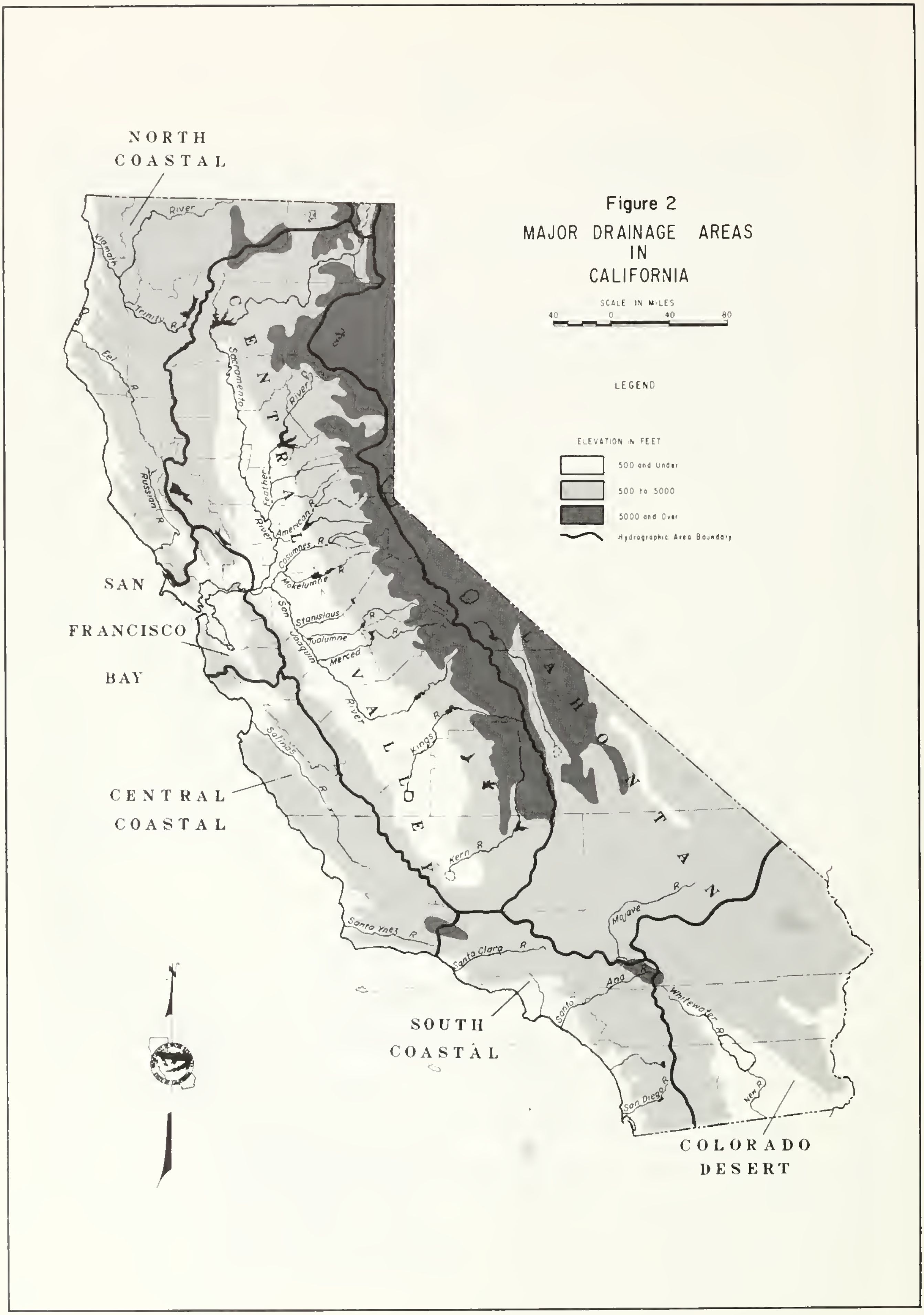


Figure 2
MAJOR DRAINAGE AREAS
IN
CALIFORNIA
SCALE IN MILES
40 0 40 80
LEGEND
ELEVATION IN FEET
500 and Under
500 to 5000
5000 and Over
Hydrographic Area Boundary
NORTH
COASTAL
SAN
FRANCISCO
BAY
CENTRAL
COASTAL
SOUTH
COASTAL
COLORADO
DESERT
CENTRAL
VALLEY
LAHONTAN
Klamath
River
Trinity R
Eel R
Russian R
Sacramento River
Feather River
American R
Cosumnes R
Mokelumne R
San Joaquin River
Stanislaus R
Tuolumne R
Merced R
Kings R
Kern R
Salinas R
Santa Ynez R
Santa Clara R
Santa Ana R
Mojave R
Whitewater R
San Diego R
New R

INTRODUCTION

Flooding in California during the water year October 1, 1970, to October 1, 1971, was minor, although extreme weather patterns prevailed throughout the State. A number of weather records were set, including the wettest November on record in San Francisco and Stockton, and the heaviest rainfall for a 24-hour period in Southern California. Storm durations also set records; Sacramento recorded 15 consecutive days of measurable rain. Early season snow in the mountains was extremely heavy. The snowpack at Norden was the deepest of record for December and January. Conversely, the entire State was subjected to a midwinter drought in February. It was the longest drought of record in Red Bluff.

In mid-October rain fell in the North Coastal regions and the Sacramento Valley. These rains were light and the streams and rivers responded only slightly. Storms during the first of November also had very little effect on the rivers, but on the weekend before Thanksgiving a storm entered California from the northwest through the Smith River Basin, causing minor rises on the North Coastal area rivers. When the storm moved into the Sacramento Valley, rivers rose slightly.

A new storm a few days after Thanksgiving dropped heavy amounts of rain on both the San Francisco and Sacramento areas. High gusty winds knocked down powerlines and trees. A substantial runoff in San Francisco and Daly City flooded streets. Rivers rose rapidly to warning stages in the upper Sacramento Valley, and to floodstages at Bend Bridge, at the town of Tehama, and at Vina Bridge. Further downstream rivers did not exceed flood stage, although flow did occur in the bypass system.

Storms continued to move into the State throughout December, keeping rivers at moderately high levels. January brought new storms, but no major flooding. February was very dry, but in March another series of storms arrived. These dropped only light rain on the valleys but large amounts fell in the mountains, causing heavy runoff at high elevations. The reservoirs restrained this runoff, forestalling floods in the Central Valley. Precipitation during the rest of the water year dwindled so that, despite the auspicious beginning, precipitation for the year was only normal to below normal.

From November 28 to December 29 and again from January 15 to January 20, the Flood Operations Center in Sacramento operated continuously. However, no major emergencies arose and the Flood Center staff was not required to take any special action.

Before the water year began, the Los Angeles-San Diego area was subjected to some of the worst brush and forest fires the State has ever known. Because the denuded slopes gave promise of massive mud slides and debris flows, the region was declared a disaster area, making emergency flood control funds available to the counties. Money was also allocated to reseed the burned slopes so that new plant life could be started on the slopes before the major rain season. Although late November storms set rainfall records throughout the area, later storms were not as intense or lengthy as had been feared. The denuded slopes

caused no major disaster, although some large mudslides and debris flows did occur.

The increase in flood storage capacity provided by two new dams completed early in the water year is expected to significantly influence flood flows in the Central Valley. Bullards Bar Dam on the North Fork of the Yuba River and New Don Pedro Dam on the Tuolumne River will greatly reduce flooding on these rivers.

Hydrologic data presented in this bulletin are supplied by several agencies, both public and private, and are considered reliable and accurate. However, these data may be revised on the basis of subsequent information.

WEATHER PATTERNS OF THE 1970-71 SEASON

The first storms entered California in October but, because the soil was unusually dry, very little runoff occurred. November precipitation was above normal over the entire State -- as much as four times the normal value in many areas.

Two major periods of precipitation occurred in November and December: November 4-12, and November 22-December 9. During both, troughs of low pressure developed in the upper levels near the West Coast with a southwesterly flow over California. With this circulation pattern, a series of weather fronts brought precipitation to most of the State.

The pattern over California was associated with meteorological events in Canada. A blocking high-pressure center located over eastern Canada in October moved to northwest Canada in the first half of November and to the Aleutians later in the month. The effect was to force the jet stream at mid-latitudes to move south, shunting the storm track south as well.

The first weather front moved into the State on November 4. At the same time a large high-pressure area bringing cold air from Canada moved south into the Rocky Mountains. This was the first major outbreak of cold air of the season. Two other Pacific cold fronts moved into California during this period. Precipitation during the nine-days storm totalled 10 to 12 inches on the north coast and in the upper Sacramento Valley, while the northern Sierra Nevadas received eight to nine inches.

A ridge of high pressure in the eastern Pacific during an intervening period, November 13 to 21, brought a brief rain-free period, except for some light precipitation along the north coast on November 15 and 16.

Between November 22 and December 9, an active trough of low pressure was reestablished over the eastern Pacific and storm systems moving over California were renewed. The blocking high was very well developed in the Aleutians during the last week in November, and the weather fronts moved out of the Gulf of Alaska into the upper level trough entrenched along the 130° W meridian.

The weather front of November 24 had a west-east orientation along the Oregon-California border and, on the following day, when this front had moved into central California, it was replaced by a second front similarly oriented at the Oregon border. Heavy precipitation occurred on November 24-25. Another front -- a cold front with waves -- moved into the North Coast area on November 27 and brought another two days of heavy precipitation. Five days later, on December 4, another front with a

strong surge of moisture brought a concentration of precipitation, which culminated in major rises on North Coastal area streams and the upper Sacramento River.

From November 22 through December 9, precipitation varied from 25 to 35 inches at North Coast stations to 25 inches at upper Sacramento stations. Amounts at specific stations are presented in Table 1.

The November 27 front brought cold air in its wake over the entire State, and snow fell in the mountains from November 28 through December 4. The snow level in northern California dropped to 2,000 feet elevation and in the central Sierra Nevada to about 3,500 feet elevation. The December 4 front became stationary near Sacramento, and the advection of a warmer air mass from the Pacific brought a warming trend in northern and central California. December was wet and cool. Above-normal amounts of rainfall occurred over most of the State, except in the desert areas and southern San Joaquin Valley, and heavy amounts of snow fell in the mountains. Heavy precipitation which fell December 2 to 4 was accompanied by a lower snow level. Two additional wet periods occurred from December 13 to 21 and December 26 to 31.

The broad-scale hemispheric flow pattern on the mean upper level chart for December was marked by relaxation of the blocking in Aleutian area and the establishment of a new blocking regime in the Atlantic. The flow over the Pacific Ocean on the mean chart for December was more zonal, with a band of strong winds near Japan and another over the eastern Pacific at 45° N latitude. The southern branch of the second jet dipped south over San Diego and southern Arizona. The mean zonal pattern varied during the third week of the month, when a low-pressure trough of moderate amplitude lay along the West Coast.

By mid-December several fronts had moved through the State. The strongest of these were the occlusions of December 15 to 16 and December 20 to 21, when many stations recorded 24-hour precipitation of 1 to 2 inches. Overall accumulations for the nine-day period were not heavy, but continued precipitation maintained streamflows at moderate levels.

By December 17, a deep, upper level trough was established near the coast. This trough brought very cold air. During the following days a large quantity of snow fell. The National Weather Service office at Mt. Shasta (elevation 3,544) had 2 inches on the ground at midmonth, 10 inches by the morning of the 18th and 22 inches by the 21st; Blue Canyon (elevation 5,280) had 30 inches of snow on the ground on December 15; 51 inches on December 17, 68 inches on December 22, and 82 inches at the end of the month. The total recorded snowfall at Blue Canyon during December was 121 inches, the second greatest amount of record for that month. Significantly heavy amounts of snow fell on December 19 in the Tehachapi Mountains, where drifts up to 8 feet high stopped traffic on Interstate Highway 5. At the National Weather Service Office at Sandberg in Los Angeles County, snowfall in the four-day period, December 18 to 21, totalled 24.4 inches.

The final December storm series began on December 26 and ended January 2, 1971. These were cold storms that deposited snow at low elevations. On December 29, many stations on the north coast and in the Sacramento drainage basin recorded more than 2 inches of rain in 24 hours.

Figures 5 and 11 illustrate how precipitation for November and December varied from normal on the north coast and in the Sacramento Valley.

The important storm of the season occurred in January. On January 10, a prominent ridge of high pressure formed at longitude 160° W and a closed low-pressure

Table 1: Precipitation Amounts at Selected Stations

Station	County	Elev.	Nov. 21-Dec. 9	Jan. 9-Jan. 20	Mar. 22-Mar. 27
Hoopa	Humboldt	345	19.97	10.46	5.87
Laytonville	Mendocino	1,640	18.94	10.59+	7.65
Redding Fire Station #2	Shasta	580	11.16	3.95	3.26
Sacramento WSO	Sacramento	17	7.00	0.65	1.24
Blue Canyon WSO	Placer	5,280	19.49	7.83	6.79
Calaveras R.S.	Calaveras	3,343	12.65	MSG	2.51
Milo 5NE	Tulare	3,400	7.58	1.58	0.12
Bakersfield WSO	Kern	475	1.68	0.19	0
Huasna	San Luis Obispo	715	5.51	2.02	0.20
Cachuma Dam	Santa Barbara	781	5.72	0.39	0
Mt. Wilson	Los Angeles	5,709	11.79	1.14	0

Table 2: Maximum One-Day Precipitation Amounts at Selected Stations
November 21 - December 9, 1970.

Station	Amount	Date	Station	Amount	Date
Klamath	5.9	November 24, 1970	Calaveras	1.48	December 2, 1970
Hoopa	3.69	December 3, 1970	Milo	2.96	November 25, 1970
Laytonville	5.28	December 3, 1970	Bakersfield	0.99	November 25, 1970
Yorkville	4.8	December 3, 1970	Huasna	1.96	November 25, 1970
Redding	2.87	November 28, 1970	Cachuma	2.81	November 29, 1970
Sacramento WSO	2.42	November 28, 1970	Mt. Wilson	6.20	November 29, 1970
Blue Canyon	2.60	November 28, 1970	Los Angeles	2.43	November 29, 1970
San Francisco	1.76	November 28, 1970			

center formed off the British Columbia coast. On succeeding days, the ridge began to build, with its line rotating clockwise over Alaska. The ridge generated a strong northeast jet stream that extended southwest toward a low-pressure trough over the ocean south of Alaska and strengthened the southwest flow at latitude 30° N. This flow, also a powerful jet stream, headed toward northwest California. The fetch of the warm air mass in this flow extended 3,000 miles to the region north and northwest of the Hawaiian Islands. The weather map for January 15, 1971, is shown in Figure 3.

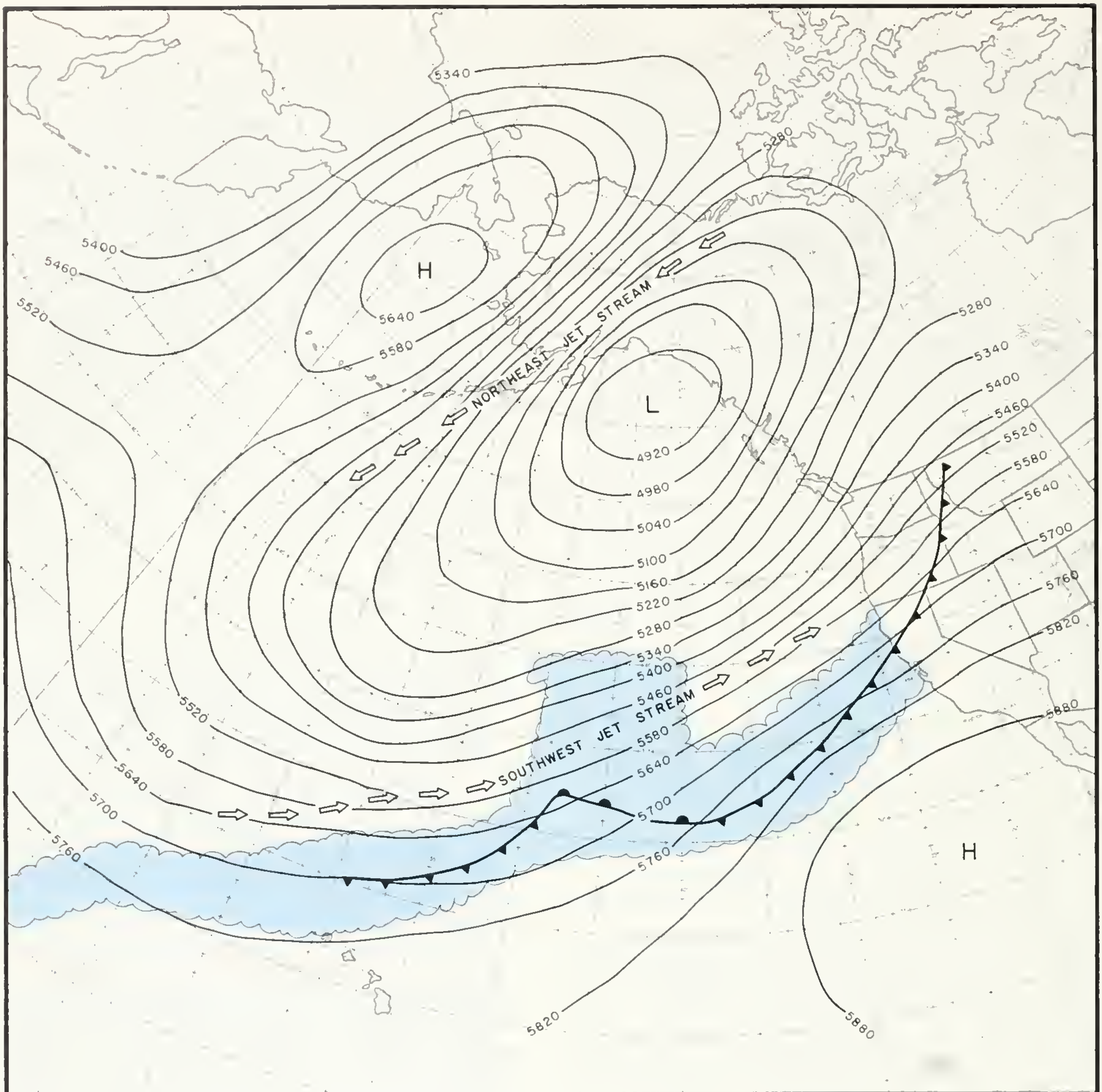
Precipitation began in the North Coast area on January 9, but the strong flow of moist air did not become well developed until January 15. This flow pattern continued through January 18; on January 19, the flow had weakened markedly and the fetch shortened.

Figure 4 presents a time plot of the pressure gradient between San Francisco and Arcata (related to the onshore low-level wind flow), dewpoint temperature at Arcata (moisture parameter), the mean relative humidity between the surface and 500 millibars (mb) at Medford (moisture in depth), the speed of the 700 and 500 mb wind at Medford, and the hourly precipitation amount at the recording rain gage at Klamath. An isohyetal map of the precipitation totals in the 12-day period, January 9 to 10, is shown on Figure 6. The heaviest precipitation occurred January 15 to 17, with many stream gaging stations peaking either late on the 16th or early on the 17th. The area affected by this storm covered the North Coast drainage area through the Russian River Basin, the upper Sacramento River Basin, and the northern Sierra Nevada through the Feather River Basin.

The final significant storm system of the season occurred on March 25-26, 1971. This storm had the characteristics of the classical Norwegian wave cyclone. A wave formed near the 140° W meridian at 35° W latitude (about 1,200 nautical miles WSW of Eureka), moved towards the Northern California coast, occluded as it approached the coast, and curved northeastwards parallel to the Oregon-Washington coast. Some warm frontal precipitation began falling in the Sacramento Valley on March 25, but the heaviest precipitation came with passage inland of the occluded front. The precipitation amounted to two-day totals of 3 to 5 inches in the north coast and central valley basins; heaviest amounts fell in the Trinity, Eel, and Russian River areas.

SACRAMENTO BEE PHOTO

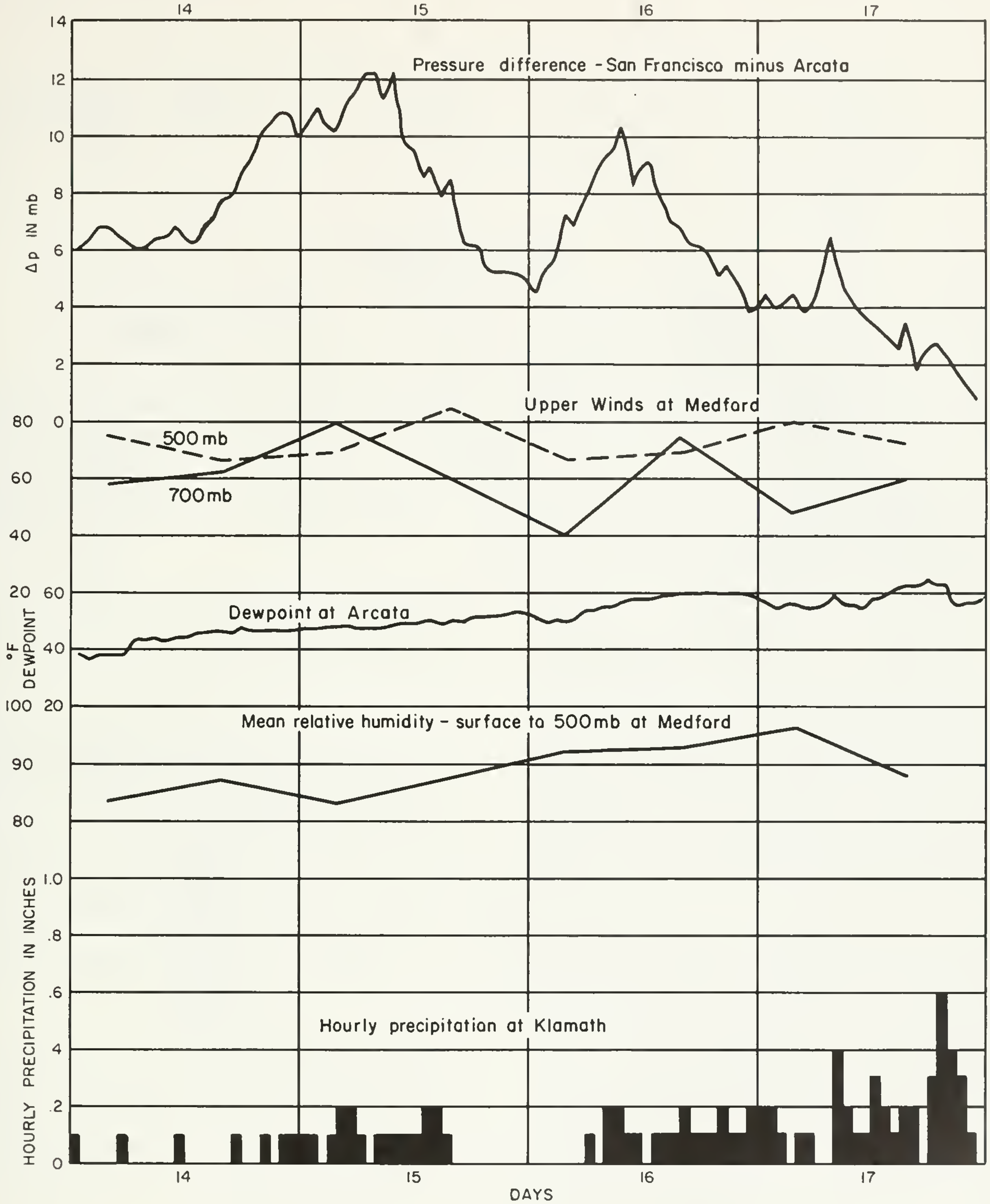
California Highway Patrol Unit checks progress of a rotary snowplow clearing a slide on U. S. 50 east of Echo Summit.



SOLID LINES ARE THE CONTOURS OF THE 500-mb PRESSURE SURFACE LABELLED IN METERS CONTOUR INTERVAL IS 60 METERS WINDS BLOW PARALLEL TO THE CONTOURS WITH LOWER HEIGHTS TO THE LEFT OF THE WIND VECTOR H AND L, RESPECTIVELY REPRESENT AREAS WHERE THE HEIGHTS OF THE 500-mb ARE HIGH AND LOW SUPERIMPOSED ARE THE FRONTAL SYSTEMS FROM THE SURFACE WEATHER MAP THE SCALLOPED AREAS REPRESENT THE EXTENT OF THE CLOUD COVER AS VIEWED FROM THE NOAA SATELLITE ITOS-1

NOTE THE EXTENDED FETCH OF THE SOUTHWEST FLOW FROM THE REGION NORTH OF HAWAII (LATITUDE BAND 25°-30°N) FLOWING TOWARDS NORTHERN CALIFORNIA AND OREGON

Figure 3
500-mb CHART FOR 1600 PST JANUARY 15, 1971



ITEMS SHOWN ARE THE PRESSURE DIFFERENCE (Sea Level) BETWEEN ARCATA AND SAN FRANCISCO, THE 700 AND 500 m.b. WIND SPEEDS AT THE MEDFORD, OREGON RAWINSONDE STATION, THE DEWPOINT TEMPERATURE AT ARCATA, THE MEAN RELATIVE HUMIDITY BETWEEN THE SURFACE AND 500 m.b. AT THE MEDFORD RAWINSONDE STATION, AND THE HOURLY PRECIPITATION AT KLAMATH. SEE THE TEXT FOR DISCUSSION.

Figure 4: TIME PLOT DURING THE PERIOD JANUARY 14-17, 1971

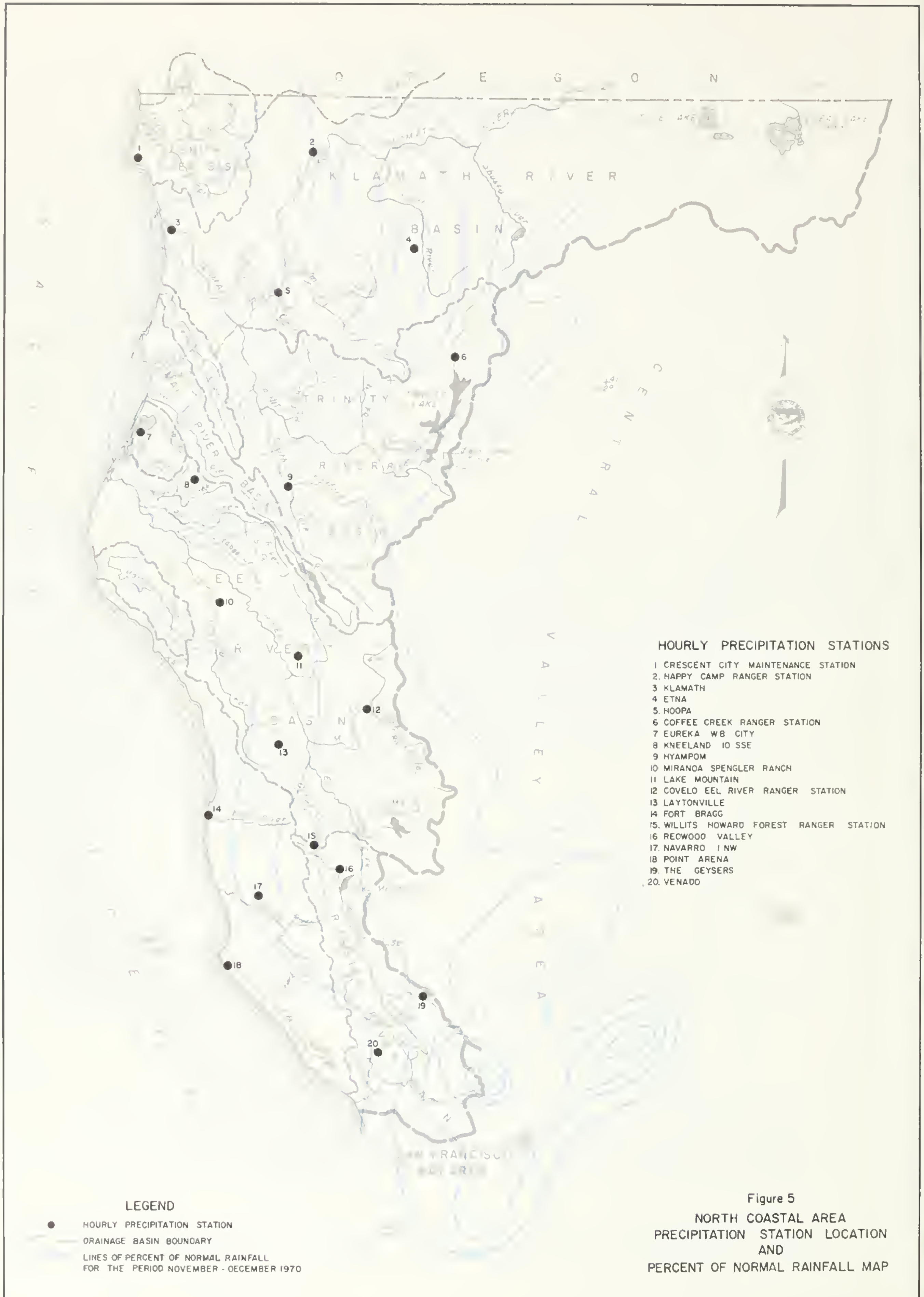


Figure 5
NORTH COASTAL AREA
PRECIPITATION STATION LOCATION
AND
PERCENT OF NORMAL RAINFALL MAP

RAINFALL RUNOFF

North Coastal Hydrographic Area

The North Coastal Hydrographic Area is about 270 miles long and varies in width from about 180 miles in the north to about 30 miles in the south. It is sparsely populated; its prime industries are timber, agriculture, and recreation.

Storms that move into California usually hit this area first before moving into the rest of the State. Storms are also more frequent and intense than in other areas.

Annual rainfall averages are among the highest in the State and range from almost 30 inches in the Russian River Basin to more than 100 inches at some locations in the Smith River Basin. These amounts produce approximately 40 percent of the average annual runoff for the State. Because most of the area is below 8,000 feet elevation, it receives very little snow.

Several major streams and their tributaries drain this area: the Smith, Klamath, Mad, Eel, and the Russian Rivers and Redwood Creek. Smaller streams such as the Ten-mile River, Jug Handle Creek, and Hollow Tree Creek complete the natural drainage.

Throughout the water year, high water caused no major damage. Mud slides which are common to the loosely-compacted soil found in this area brought only nominal damage. Some low-lying agricultural lands received debris and silt deposits. The first storm series in October caused minor rises on the rivers. A new series of storms in mid-November continued into December, causing rivers to rise rapidly. The Smith and Eel Rivers reached flood stages for a short time. Rivers rose again in January and flood stages were reached again on the Smith and Eel Rivers.

A winter drought began mid-January and ended the first week in March, when rain caused some river rises. Flood stages were recorded at a few locations and some minor flooding was reported.

Smith River Basin

Smith River, the northernmost stream in the North Coastal Hydrographic Area, drains approximately 720 square miles. About 90 square miles lie in Oregon. The Smith River begins in Oregon, winds through the northwest corner of California, and discharges into the Pacific Ocean a few miles south of the Oregon border.

The basin contains rugged mountains and foothills, most of which are below the 3,000-foot elevation; some mountains along the eastern edge rise to 5,000 feet. This basin is usually the first part of the State to be hit by storms. Rainfall averages nearly 80 inches per year. Some stations receive more than 110 inches per year. Rainfall in excess of one inch per day occurs in this basin about twenty days of every year. Most of this precipitation occurs between October and April, causing high river stages several times a year, and flood stages occasionally.

When the Smith River exceeds flood stage, a phenomenon occurs. Flood water near the mouth of the river flows into Lakes

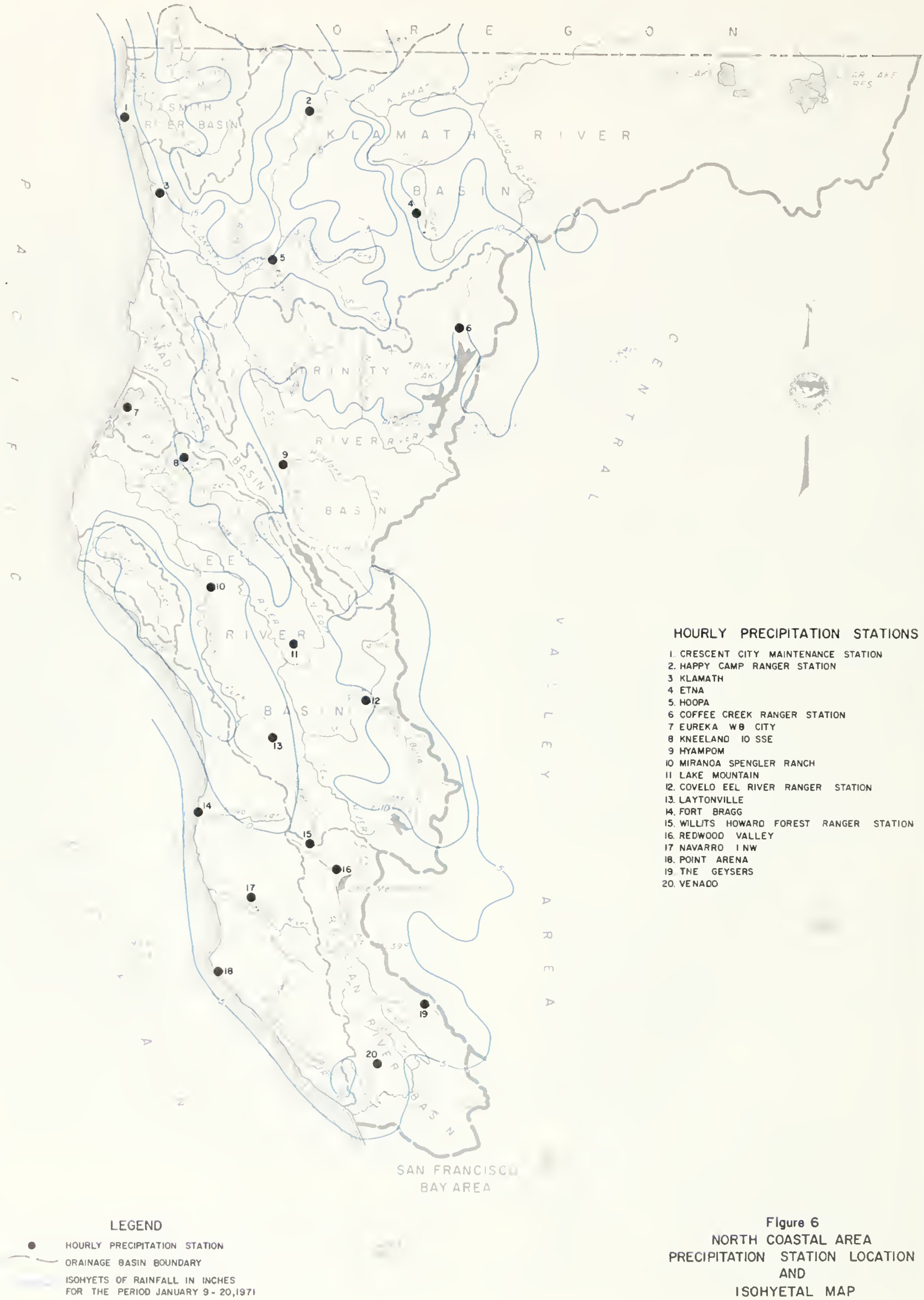


Figure 6
NORTH COASTAL AREA
PRECIPITATION STATION LOCATION
AND
ISOHYETAL MAP

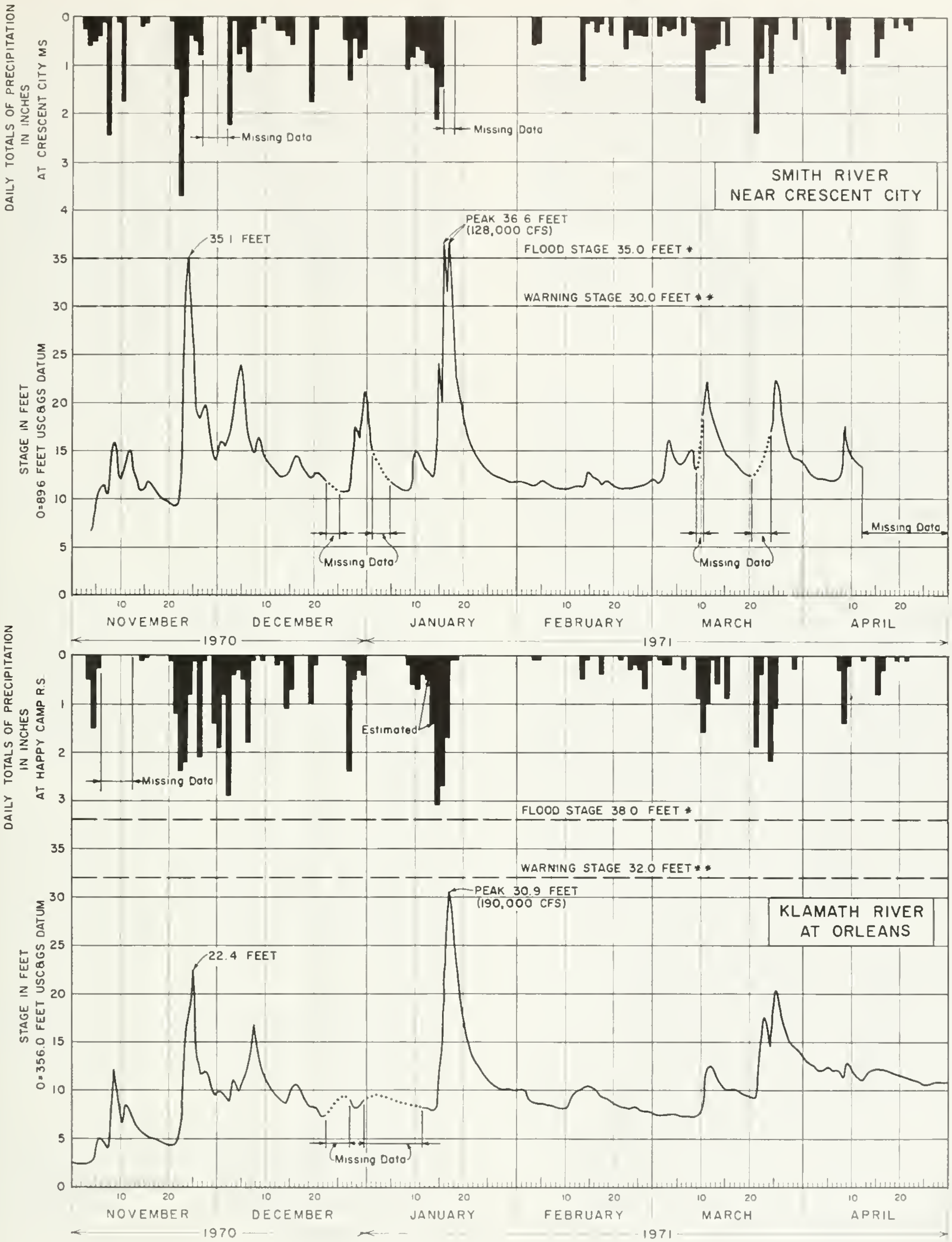


Figure 7: HYDROGRAPHS OF SMITH AND KLAMATH RIVERS

* FLOOD STAGE - Nonleveed Streams - Stage at which significant overbanking occurs
- Leveed Streams - Stage at which design capacity of levee is reached

** WARNING STAGE - Nonleveed Streams - Stage at which initial action must be taken
- Leveed Streams - Stage at which patrol of project levees becomes mandatory

NOTE: 1. Curves are derived from operational data
2. Discharge figures are in-channel flow only and do not include overland flow

Earl and Talawa, which lie several miles to the south. These lakes drain into the ocean through a small outlet that must be opened occasionally when a sand bar develops at that point. If this outlet is not opened, lake levels will rise abnormally high and low-lying lands flood. When the lake levels are low, flood water flowing into the lakes from Smith River is confined to several small channels and culverts, and the system acts as a release valve to reduce lowland flooding.

During October, a short series of storms brought light rain to the area. River rises were slight. In November, new storms had much more effect. The Smith River rose to flood stage on November 24 but quickly receded without major damage. During this storm, several rainfall records were exceeded, including that for the 24-hour period at the Gasquet Ranger Station where 6.43 inches fell on November 24.

Heavy rainfall occurred throughout November and much of December. Each burst caused the river to respond but river stages remained below flood levels. Some low-lying roads were closed but damage was minor.

Heavy rain lasting several days began again on January 8, 1971, and caused the Smith River to go slightly over flood stage. Mud and rock slides closed several highways and caused minor damage. During this storm a double peak occurred. The river exceeded flood stage on January 17, then receded. During this rise Lakes Earl and Talawa were low and very minor lowland flooding occurred. The river peaked again 24 hours later at an identical stage but with very different results. Because the lakes were full, the second peak caused extensive lowland flooding, closing highway 199 for several hours.

The remainder of the winter and spring was exceptionally dry. Storms moved through the area, causing some minor river rises, but all peaks were well below warning stage.

Klamath River Basin

Lying south and east of the Smith River Basin is the 15,700-square-mile Klamath River Basin, of which nearly a third lies in Oregon. Major tributaries to the Klamath River included in this basin are the Salmon, Scott, Shasta, and Trinity Rivers. It is a rugged mountain area, with elevations ranging from sea level to over 8,000 feet. The basin is sparsely populated by residents employed mostly in logging. It is a prime recreational area.

The Klamath River Basin receives heavy rainfall. Some areas receive as much as 80 inches per year.

During October, storms caused minor rises on the Klamath River and no damage was reported. Another stormy period began in November and caused rapid rises along the river. However, high water was well below warning stage and no damage was reported in November and December. Some low-lying roads were flooded.

Storms with heavy rain and gale winds entered again in January, and this time mud slides closed several roads. One county employee was killed by a slide while working to clear a previous slide. Some lowlands along the river were flooded, but the only damage was deposition of debris and silt. The highest peak of the entire season, which occurred on January 17, was well below warning stage.

Very little additional rain fell in this basin until mid-March when heavy rains hit the basin again, but these only brought minor peaks. No flooding was reported anywhere.

Eel River Basin

The 3,700-square-mile Eel River Basin is an area famous for its tall redwoods.

Its major tributary is the Van Duzen River. The Basin is made up of rugged mountains having heavily wooded hillsides and elevations ranging from sea level to nearly 7,000 feet. Average annual rainfall ranges from about 40 inches near the coast to more than 80 inches near the headwaters of the Eel and Van Duzen Rivers. Runoff amounts to nearly nine percent of the average runoff for the entire State.

The river carries a quantity of suspended sediment to the ocean that equals 33 million tons of soil per year, the highest average suspended sediment yield per square mile of any river in the United States as large as or larger than the Eel River.

Some light rain fell in the Eel Basin in October, resulting in minor river rises. November storms moved in rapidly, accompanied by gale winds. Runoff caused the Eel and Van Duzen Rivers to rise rapidly, but the peaks did not reach flood stages. These storms continued into December with new rises on the rivers. The upper Eel River failed to reach dangerous stages, but the Van Duzen River flooded its banks at Bridgeville and inundated lowlands for a short time early in December. The lower Eel River flooded its banks near its mouth at Fernbridge at about the same time. Lowlands in the delta were flooded and silt and debris were deposited on low-lying lands.

Numerous mud slides closed several roads but little damage was reported. The railroad was closed for several hours near the town of Pepperwood. The continuing downpour in early December also caused flooding from local runoff in Ferndale and Eureka. Rain showers continued through the rest of December, but no flooding occurred.

After a brief dry spell, rain began again after January 1. The rivers responded quickly and the Van Duzen River peaked slightly above warning stage in the first week of January. These rises also caused the Eel River to go over flood stage again near Fernbridge. Delta lowlands were flooded and silt and debris deposited. Mud slides closed several highways and local roads. Highway 101, the main north-south route, was closed near Leggett for a short time.

The weather then became unusually dry and remained so into March. In mid-March, storms caused the rivers to rise and flooding was reported along the Eel and Van Duzen Rivers. Flood peaks occurred at several points, flooding lowlands and depositing silt and debris. Flooding along the Eel River during March is unusual. The most recent floods recorded during this month occurred in 1940 and 1949.

Russian River Basin

The 1,800-square-mile Russian River Basin, lying at the southern end of the North Coastal Hydrographic Area, contains mountains that rise to nearly 4,700 feet. The Russian River begins in the mountains north of Ukiah and flows south through Healdsburg and turns west and flows toward the ocean at Jenner, covering a distance of nearly 112 miles. The basin is a prime recreational area for people from the San Francisco Bay Area. Numerous summer homes line the river near Guerneville.

October storms produced only minor rainfall in the basin. In November, major storms brought large amounts of rain. Rain early in November had very little effect on the river, but an intense rain squall late in the month caused the Russian River to rise sharply. Continued bursts of heavy rain caused the river to rise to about four feet over flood stage near Guerneville on December 3. Some homes and lowlands were flooded near the river. Two additional wet periods occurred in December and more minor rises took place, but these peaks stayed well below flood stages.

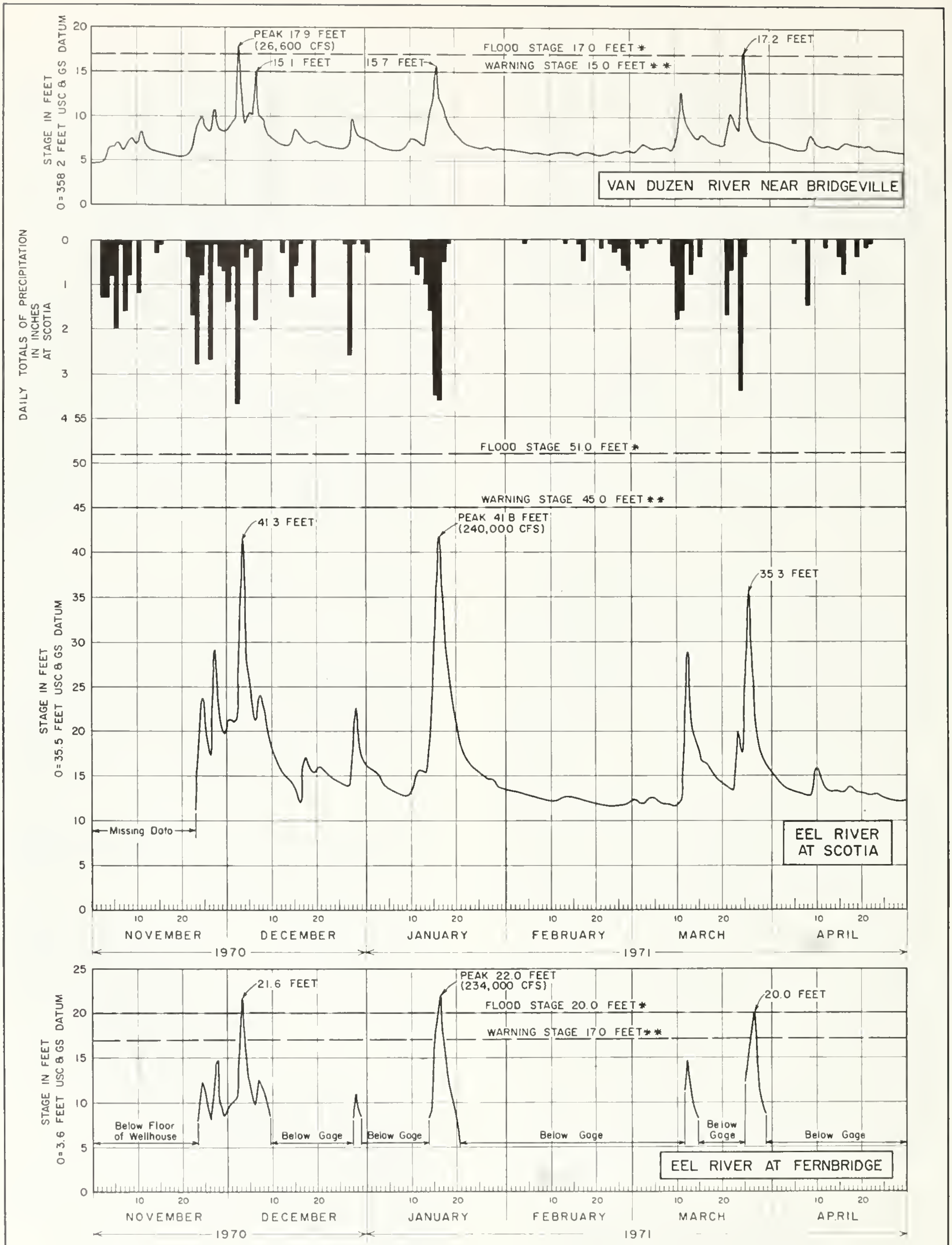


Figure 8: HYDROGRAPHS OF VAN DUZEN AND EEL RIVERS

* FLOOD STAGE — Nonleveed Streams - Stage at which significant overbanking occurs
— Leveed Streams - Stage of which design capacity of levee is reached

** WARNING STAGE — Nonleveed Streams - Stage at which initial action must be taken
— Leveed Streams - Stage at which patrol of project levees becomes mandatory

NOTE: 1. Curves are derived from operational data
2. Discharge figures are in-channel flow only and do not include overland flow

Figure 9 : HYDROGRAPHS OF RUSSIAN RIVER

* FLOOD STAGE – Nonleveed Streams – Stage at which significant overbanking occurs
– Leveed Streams – Stage at which design capacity of levee is reached

** WARNING STAGE – Nonleveed Streams – Stage at which initial action must be taken
– Leveed Streams – Stage at which patrol of project levees becomes mandatory

NOTE 1 Curves are derived from operational data
2 Discharge figures are in-channel flow only and do not include overland flow

New river rises resulted from January storms. The highest peak approached warning stage near Guerneville and quickly receded. No damage was reported.

This basin was relatively dry from mid-January until the first week of March, when new storms arrived. Dry soil absorbed the runoff and the river only peaked at moderate levels and quickly receded.

San Francisco Bay Hydrographic Area

The San Francisco Bay Hydrographic Area extends along the Pacific Ocean from north of Petaluma to near Gilroy in the south and inland to Pittsburg. The area includes land around Suisun, San Pablo, and San Francisco Bays, and several small streams that drain either into the bays or the ocean. Residents of this area must be alert during the winter because these small streams react quickly to rainstorms. Major streams in the area are the Napa River in the Napa Valley, and Petaluma River, running from near Cotati to San Pablo Bay.

Flooding is chiefly local; flash floods occur on the smaller streams and some floods on the two major streams. Runoff is generated almost entirely by rain since mountain elevations are low and very little snow falls.

Rain showers during October dropped little rain; moderate to heavy amounts were reported in only one short period. Rain began falling again in early November. In the third week of November, a storm front entered the area, stalled over the San Francisco Bay area, and, on November 27 and 28 dropped 2.87 inches of rain at San Francisco. Areas of Marin County received more than 4 inches of rain from this storm. Overloaded storm sewers caused streets to be flooded; the roof of one building

SAN FRANCISCO EXAMINER PHOTO

Heavy downpour on a San Francisco street.

collapsed when its drains could not handle the downpour. Minor flooding was also reported in Alameda, Contra Costa, Marin, and San Mateo Counties. Heavy winds blew trees and powerlines down throughout the area. Water six feet deep was reported at some locations in Daly City and Burlingame south of San Francisco.

Rain continued through December but no further problems occurred. Rainfall was relatively light for the rest of the water year.

Napa River Basin

The largest stream in the San Francisco Bay Hydrographic Area is the Napa River. It drains the Napa River Valley, a basin about 230 square miles in area upstream of Napa. The river begins on the slopes of Mount St. Helena, flows through the Napa Valley, and discharges into San Pablo Bay near Vallejo.

Storms that passed through the Bay Area in October and early November had little effect on this basin. In late November, a major storm series entered and dropped heavy amounts of rain. Amounts exceeding four inches were reported at several stations in a 24-hour period, with most of the rain occurring in 12 hours. At the St. Helena gaging station, the Napa River rose about one foot per hour for nine hours. However, this peak was slightly below flood stage. On December 3, heavy amounts of rain fell again and the Napa River exceeded flood stage near St. Helena gage. High flow in the Napa River washed out a bridge on Rutherford Road, the only major damage reported.

During the rest of December and early January only light intermittent rain fell, causing some minor fluctuations on the river. All stages remained below danger levels. Storms after mid-January also had little effect on the river. February and the first week of March were extremely dry. In mid-March large amounts of rain fell on the basin. but peaks were well below the danger stage. High water damage in the basin was light, but other types of weather caused damage. In the early spring, a severe frost threatened crops. Actual losses were nominal and crops responded quickly to warmer weather. During August and early September 1971, the basin was subjected to an intense heat wave, with temperatures ranging near 100° for several days. Vineyards sustained about 30 percent damage.

Central Valley Hydrographic Area

One of the world's largest and most important agricultural regions, the Central Valley Hydrographic Area consists of all river basins that drain into the Sacramento and San Joaquin Rivers upstream of the point at which the Sacramento River empties into Suisun Bay at Collinsville. The area is about 500 miles long and 120 miles wide, stretching from Goose Lake near the Oregon border to the Tehachapi Mountains, and from the Coast Range to the Sierra Nevada. Annual rainfall is moderate to light, ranging from about 70 inches in the north to less than 10 inches in the Bakersfield area.

Principal streams of the Sacramento River Basin are the McCloud, Pit, Feather, Yuba, Bear, and American Rivers, which flow from the Sierra Nevada, and the Cottonwood, Stony, Cache, and Putah Creeks, flowing from the Coast Range. The Sacramento River runs the length of the Valley from Mount Shasta in the north to the Delta. In the San Joaquin Basin, the San Joaquin River flows north from its origin in the Sierra Nevada above Fresno to the Delta where it joins the Sacramento River near Collinsville. Principal tributaries of the San Joaquin River are the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Fresno, and Chowchilla Rivers, draining the Sierra Nevada on the east side of the San Joaquin Valley. No major streams flow out of the Coast Range on the west.

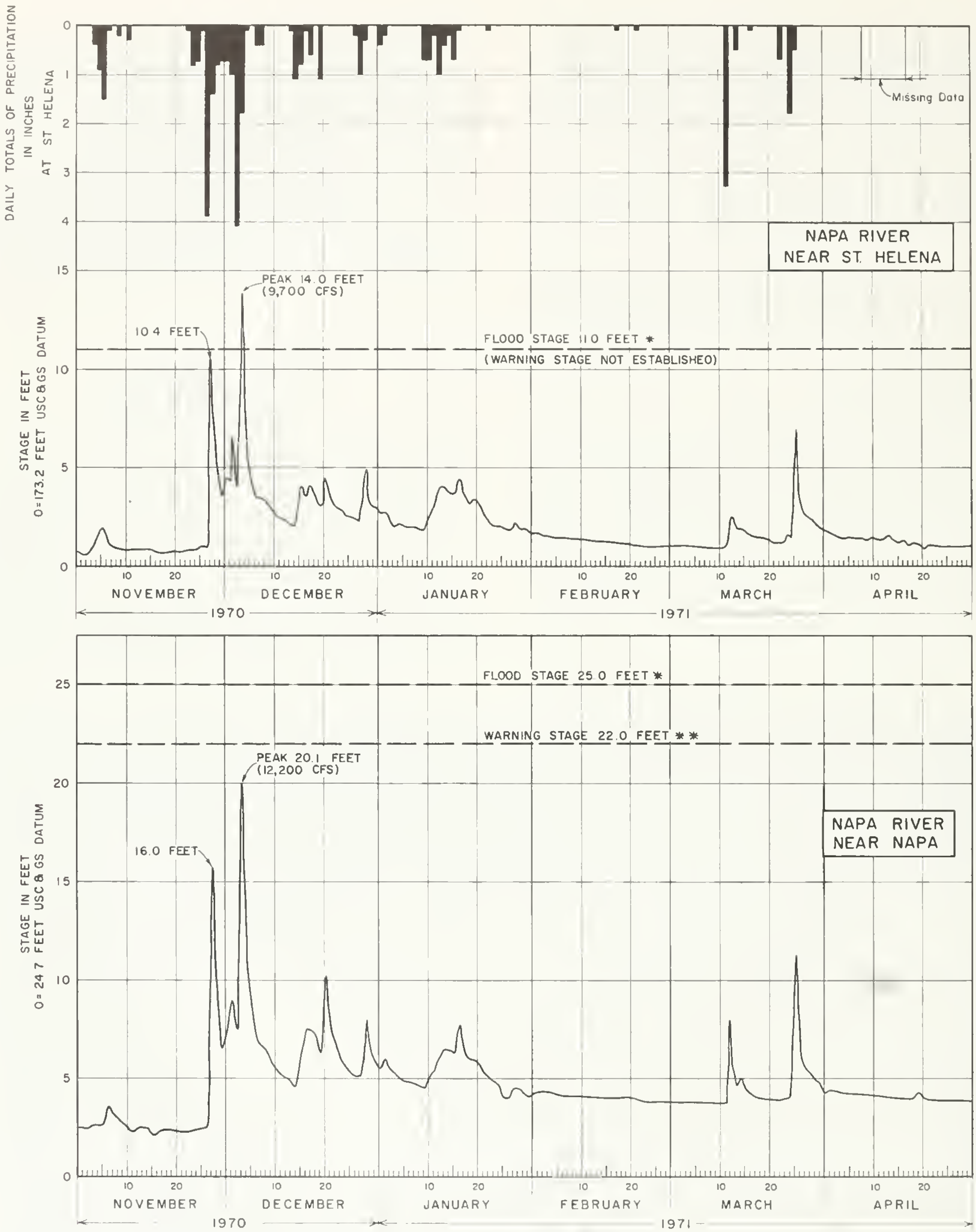


Figure 10: HYDROGRAPHS OF NAPA RIVER

* FLOOD STAGE - Nonleveed Streams - Stage at which significant overbanking occurs
- Leveed Streams - Stage at which design capacity of levee is reached

** WARNING STAGE - Nonleveed Streams - Stage at which initial action must be taken
- Leveed Streams - Stage at which patrol of project levees becomes mandatory

NOTE 1 Curves are derived from operational data
2 Discharge figures are in-channel flow only and do not include overland flow

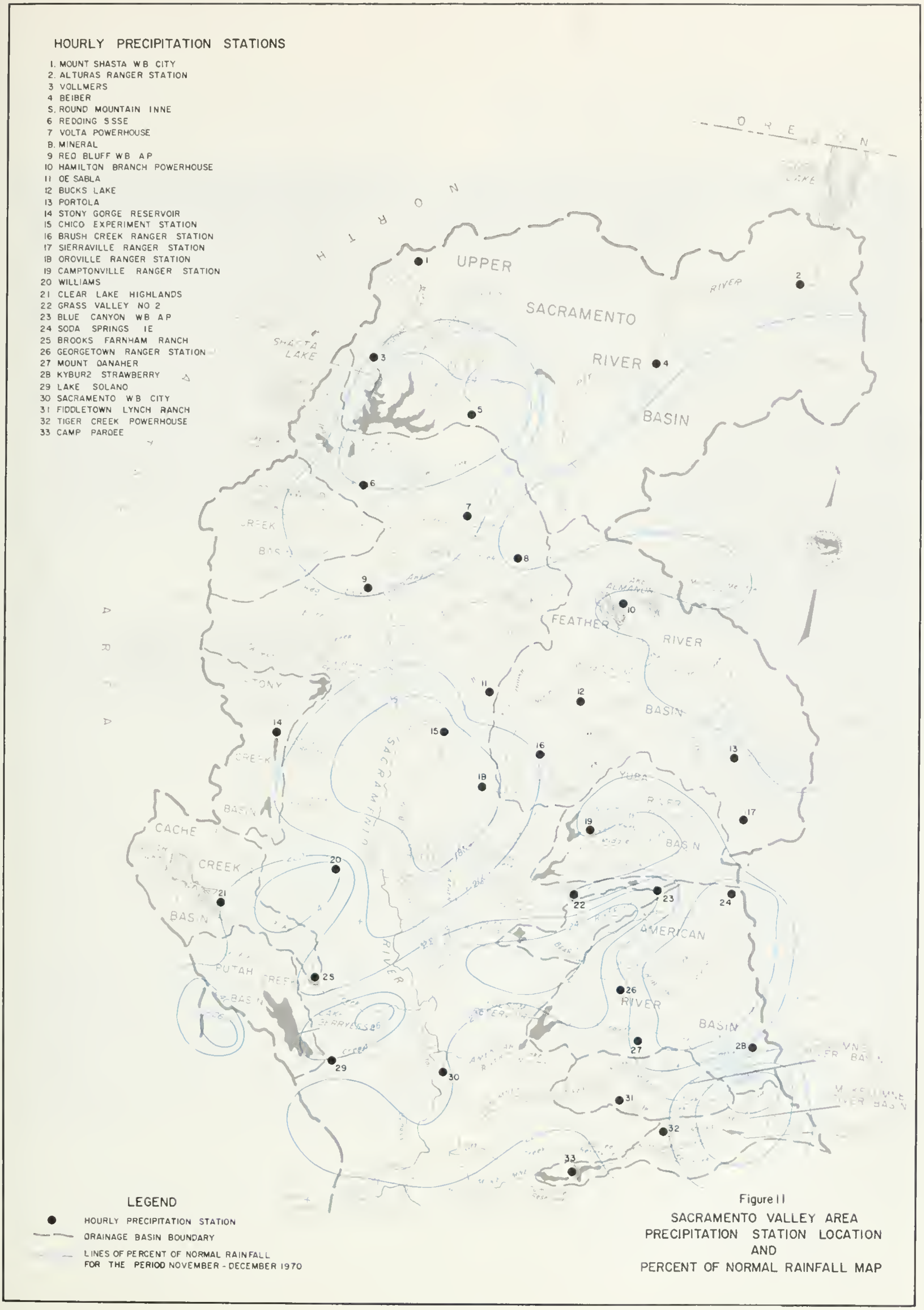


Figure 11
SACRAMENTO VALLEY AREA
PRECIPITATION STATION LOCATION
AND
PERCENT OF NORMAL RAINFALL MAP

Sacramento Bee photo

Heavy snowfall in the Sierra Nevadas closed schools, blocked roads, and stranded vehicles.

South of the city of Fresno, the Tule, Kings, Kaweah, and Kern Rivers flow from the Sierra Nevada into the Tulare Lake Basin. During high flows on these streams, some flood flows drain from the Kings River into the San Joaquin River by way of the Fresno Slough.

October storms were light and dropped only small amounts of rain in the northern Sacramento Valley. Light rains fell in early November and later that month intense rain began. Heavy rains fell at lower elevations, making rivers rise rapidly, and snow fell at higher levels. Reservoir inflow increased but releases were kept low. The storms continued into December and each new storm caused another rise in river stages. High stages on the Sacramento River caused flows in the bypasses.

These heavy rains ceased in mid-December, ending a record 15 consecutive days of rainfall in Sacramento. Shortly afterward, new storms dumped heavy snows in the upper mountain regions; record snowpacks were noted throughout the Sierra Nevada. By the end of December, a snowpack that represented about 90 percent of an average year's water supply had collected, giving the water year a favorable outlook.

January rainstorms caused new rises on the rivers and the bypasses were flooded again.

After January, the Central Valley experienced a drought until March. A record 50-day dry spell was registered in Red Bluff where only 0.14 inches of rain fell between January 19 and March 10.

Storms in the middle of March deposited heavy rain at higher elevations, while slight rain fell in the valley. Shasta and Oroville Reservoirs protected downstream areas from flooding. Both reservoirs received high inflows, but low releases and light rain kept river stages low.

At the end of September a minor storm front moved into the area, bringing rain to the valley and snow to the mountains. A record 13 inches of snow was reported at Donner Summit from this storm.

Sacramento River Basin

Beginning at the base of Mount Shasta north of Redding, the Sacramento River flows south through the Sacramento Valley and ends in the Delta below Sacramento. Shasta Lake, above Redding, with a capacity of more than 4,500,000 acre-feet, is the only flood control reservoir on this river. Inflows to the lake from the upper Sacramento, McCloud, and Pit Rivers are released downstream to the Sacramento River. The Sacramento River and its tributaries drain about 26,300 square miles in which annual rainfall varies from about 70 inches in the north to about 15 inches in the Delta.

October and early November storms caused only small rises on the Sacramento River. However, about mid-November a major storm series entered the Valley. On the 27th, a front stalled for the two days along a line extending roughly through Sacramento and San Francisco. The front was accompanied by strong winds, with gusts nearing 45 miles per hour in Sacramento. Extremely heavy precipitation fell throughout the area, causing rapid rises on the Sacramento River and overflow into the Sutter Bypass. The storm also brought record snowpacks to the Sierra Nevada. Rivers rose sharply again when a new storm series arrived on December 4. Flood stages were exceeded at several points in the northern end of the valley, and the town of Tehama was flooded. Continuing rain caused excessive runoff and, because of high inflows into Shasta Lake, releases were increased to 36,000 cubic feet per second to vacate the flood storage reservation. This was the largest release recorded at Shasta Dam for the entire water year.

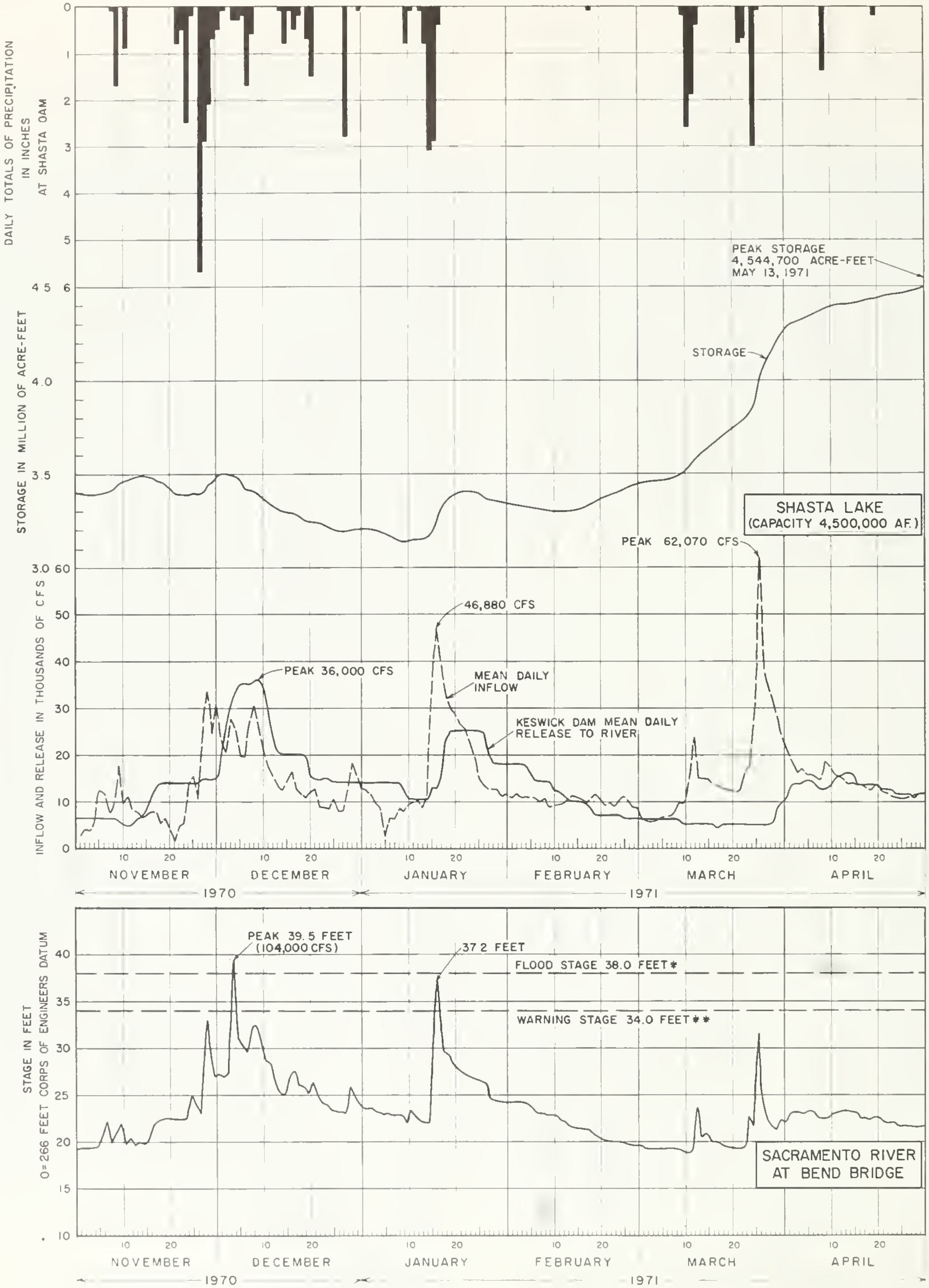


Figure 12 : HYDROGRAPHS OF SACRAMENTO RIVER-I

* FLOOD STAGE - Nonleveed Streams - Stage at which significant overbanking occurs
- Leveed Streams - Stage at which design capacity of levee is reached

** WARNING STAGE - Nonleveed Streams - Stage at which initial action must be taken
Leveed Streams - Stage at which patrol of project levees becomes mandatory

NOTE 1 Curves are derived from operational data
2 Discharge figures are in channel flow only and do not include overland flow

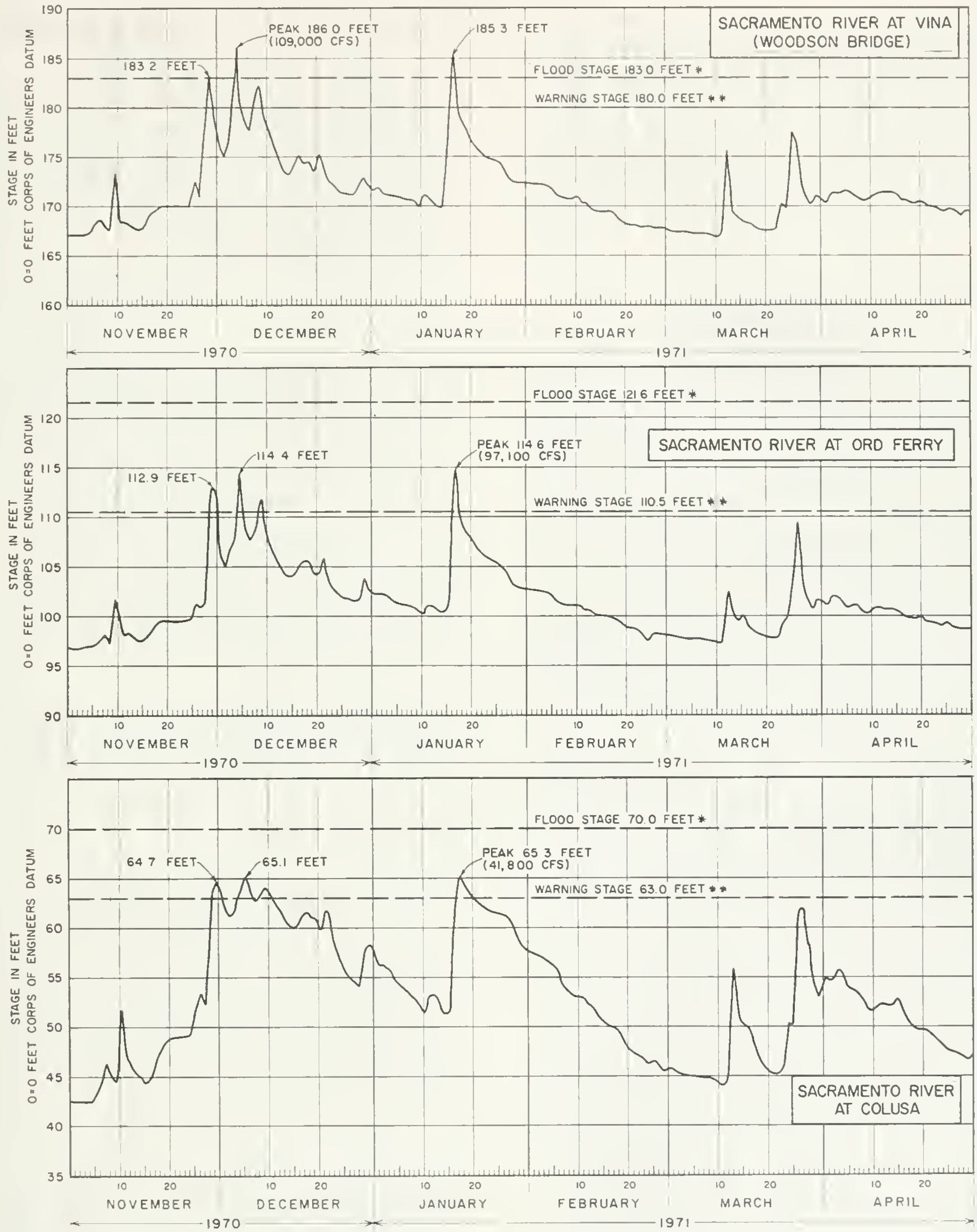


Figure 13 : HYDROGRAPHS OF SACRAMENTO RIVER - 2

* FLOOD STAGE - Nonleveed Streams - Stage at which significant overbanking occurs
- Leveed Streams - Stage at which design capacity of levee is reached

** WARNING STAGE - Nonleveed Streams - Stage at which initial action must be taken
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NOTE 1 Curves are derived from operational data
2 Discharge figures are in-channel flow only and do not include overland flow

More mountain snowstorms set new records for early season snowpacks. At Norden near Donner Summit on Interstate 80, a 100-inch snowpack was recorded on December 3, and several mountain roads were closed. The storm series ended December 8, having brought the total snowpack for the period to a level two to three times the normal.

Storms began again on December 13, and on December 16 heavy rains and winds caused severe damage throughout the Valley. Powerlines and trees were knocked down and buildings were damaged. Heavy snows reached as low as 1,500 feet and closed roads and schools. New records for snowfall were set again at Norden. By January 1, 1971, the snowpack in the Sierra Nevada had a water content 220 percent of normal for the date. This represented 90 percent of a normal year's total water supply.

Light continuing storms caused minor fluctuations on the already moderately high river. Runoff into reservoirs was low, and smaller releases kept river stages down.

On January 12 a fierce cold storm brought snow near the 2,000-foot level and closed mountain highways. Interstate Highway 80 over Donner Summit was blocked for 40 hours, the longest such closure since 1964. On the heels of this storm, a warm front moved into the Sacramento Valley on January 15, and rain pushed the upper Sacramento River to flood stage again. High inflows entered Shasta Lake on January 16. After peaks had passed downstream, the lake was lowered to its required flood storage reserve. River stages equalled those of the November-December storms and flooded the Sutter and Yolo Bypasses again. Mountain roads were closed by mud slides. High winds caused damage throughout the valley.

The snowpack began melting at lower elevations, and the runoff held stages in the Sacramento River at moderately high levels for a short time, causing some bank sloughing and endangering homes near the town of Tehama.

During the 50-day period from January 19 to March 10, only 0.38 inches of rain fell in Sacramento -- the driest comparable period since 1877, and only 0.14 inches of rain fell in Red Bluff -- the driest period for this time of year since records began in 1872.

In March, new rains ended this rare winter drought. The storms hit at high elevations; only light rain fell in the valley. Rivers rose slightly while reservoirs controlling the Sacramento River and its tributaries had high inflows. Shasta Lake had the peak inflow of the season, more than 62,000 cfs. Because the rain fell late in the season, however, the lake was allowed to retain this water. After the storms were over, the lake was filled from snowmelt runoff and only 16,000 cfs were released in April. By mid-May the lake was filled to capacity.

A cool spring slowed snowmelt. Some minor local flooding was caused by spring showers and snowmelt. In early June, a late spring snowstorm followed by a brief period of warm temperatures caused an unusual snowmelt flood near Alturas in the upper Pit River Basin. River channel work in Alturas helped pass flood flows through town without damage. High water threatened the sewage treatment ponds, which were protected by a temporary levee. Flooding on the South Fork Pit River near Likely closed Highway 395, disrupting traffic between Alturas and Susanville for several days. Flood waters also backed up on the low-lying farmlands south of Alturas, depositing silt and debris on crops.

Throughout the summer the mountains were subjected to thunderstorms. One such storm caused flash flooding on Willow Creek north of Portola in Plumas County. High water in the creek polluted the city's water supply with mud. Later in the summer, another intense thunderstorm caused flooding in Susanville.

Feather River Basin

A major tributary of the Sacramento River, the Feather River was at one time a major threat during the high water season. It is now controlled by Oroville Dam. This structure is the highest earthfill dam in the United States and impounds Lake Oroville, which has a designated capacity of 3,538,000 acre-feet. This dam controls the runoff from a 3,600-square-mile basin.

Rainstorms in the Sacramento Valley during the water year had little effect on this basin. The small storms of October and early November only dampened it. In late November, cold storms deposited snow on the upper regions of the basin, slowing runoff into the lake. The storm series continued into December but raised the lake level slowly. The lake was still below flood control reservations when the storms ended, and releases were small.

Storms in late November caused several mud and rock slides. State Highway 70, the major route through the basin, was closed by a large rock slide and by snow at higher elevations.

Mid-January storms caused a little increased runoff into Lake Oroville. At this time, however, the reservoir was close to flood reservation, and releases from the dam were increased to nearly 15,000 cfs for a few days to maintain it at the required level. Mud and rock slides closed Highway 70 again for a time. Releases from Lake Oroville were reduced to 2,000 cfs when the storms passed.

In March, a major storm brought heavy rain to all but the highest elevations where some snow fell. Resulting runoff was high, and Lake Oroville releases were raised to nearly 14,000 cfs to maintain the flood reservation. Rain continued through the rest of the month and inflow to the lake reached more than 56,000 cfs at one time. Releases were increased again to nearly 25,000 cfs, the highest release of the season.

Because this storm arrived near the end of the winter season, the reservoir was allowed to fill from continuing snowmelt runoff. It filled for the first time, in its history, with a storage of 3,553,300 acre-feet recorded on June 2, 1971.

South Coastal Hydrographic Area

The South Coastal Hydrographic Area extends along the Pacific Coast from the Tehachapi Mountains to the Mexican border a distance of about 200 miles, and inland about 75 miles. It is comprised of several river basins that drain directly into the ocean. The principal river is the Santa Ana River, which drains about one-fourth of the area. Other major streams are the Santa Clara, Los Angeles, San Gabriel, Santa Margarita, San Luis Rey, San Dieguito, San Diego, and Tia Juana Rivers. Smaller streams are the Ventura, Sweetwater, and Otay Rivers.

This area is the most densely populated region in California. Its terrain is highly vulnerable to land slippage and rain-induced mud slides that damage homes and other structures in many locations.

Before the water year began, the area was subjected to some of the worst brush and grass fires in its history. Natural vegetation on more than 500,000 acres was destroyed, inviting massive mud slides when the winter rains hit. Los Angeles County was declared a disaster area and special legislation enabled the Department of Water Resources to take remedial measures to prevent flood and debris flows from the burned areas. The Department of Conservation and the Department of Fish and Game were empowered to take measures to alleviate the danger of flooding. The Division of Forestry replanted burned areas in the

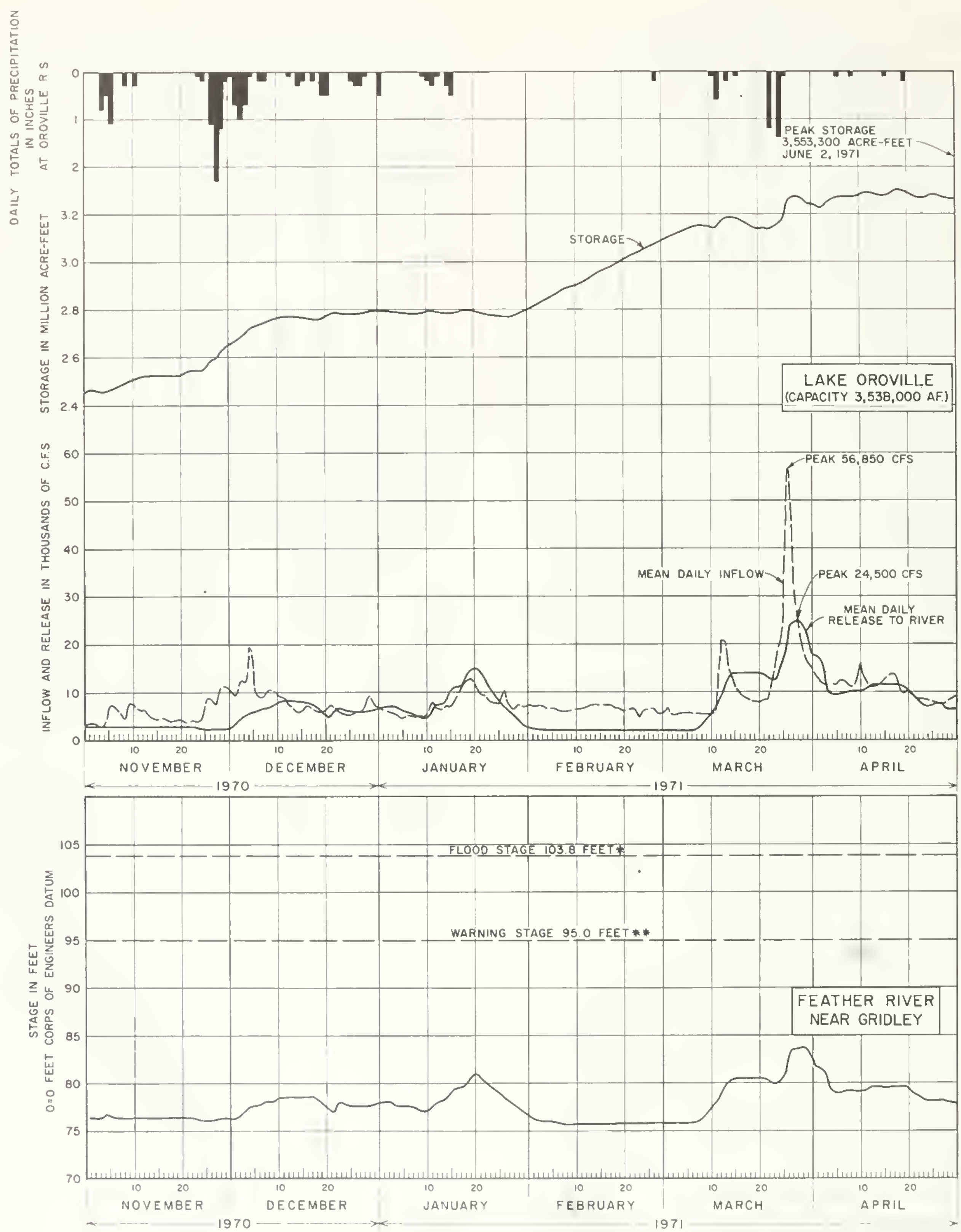


Figure 14 : HYDROGRAPHS OF FEATHER RIVER

* FLOOD STAGE - Nonleveed Streams - Stage at which significant overbanking occurs
- Leveed Streams - Stage at which design capacity of levee is reached

** WARNING STAGE - Nonleveed Streams - Stage at which initial action must be taken
- Leveed Streams - Stage at which patrol of project levees becomes mandatory

NOTE 1 Curves are derived from operational data
2 Discharge figures are in-channel flow only and do not include overland flow

hope that new growth would start before rains began.

Storms began about November 25, 1970. By November 28 the rain became a torrential downpour accompanied by winds with gusts up to 50 miles per hour. Rainfall records were set throughout the area. In a 24-hour period, 4.03 inches of rain fell at the Los Angeles Civic Center, and 7 to 10 inches were recorded at higher elevations in Los Angeles County.

Mud slides, particularly in the burned areas, closed highways and damaged homes. Flooding closed numerous highways. The storm knocked down powerlines, suspending service to about 130,000 subscribers. Three deaths were directly attributable to the storm.

Storms were light until mid-December. On December 19, 1970, rain fell at the lower elevations and snow fell in the surrounding mountains. Heavy snow closed the Golden State Freeway, the only major highway between Los Angeles and Bakersfield, stranding 1,000 people on a 20-mile stretch of road. Two days passed before the road was reopened.

More storms in late December brought rain and snow to the northern end of the area. Mud slides again occurred and roads were closed, but damage was minor.

January was relatively dry. Los Angeles recorded less than 0.5 inch of rain.

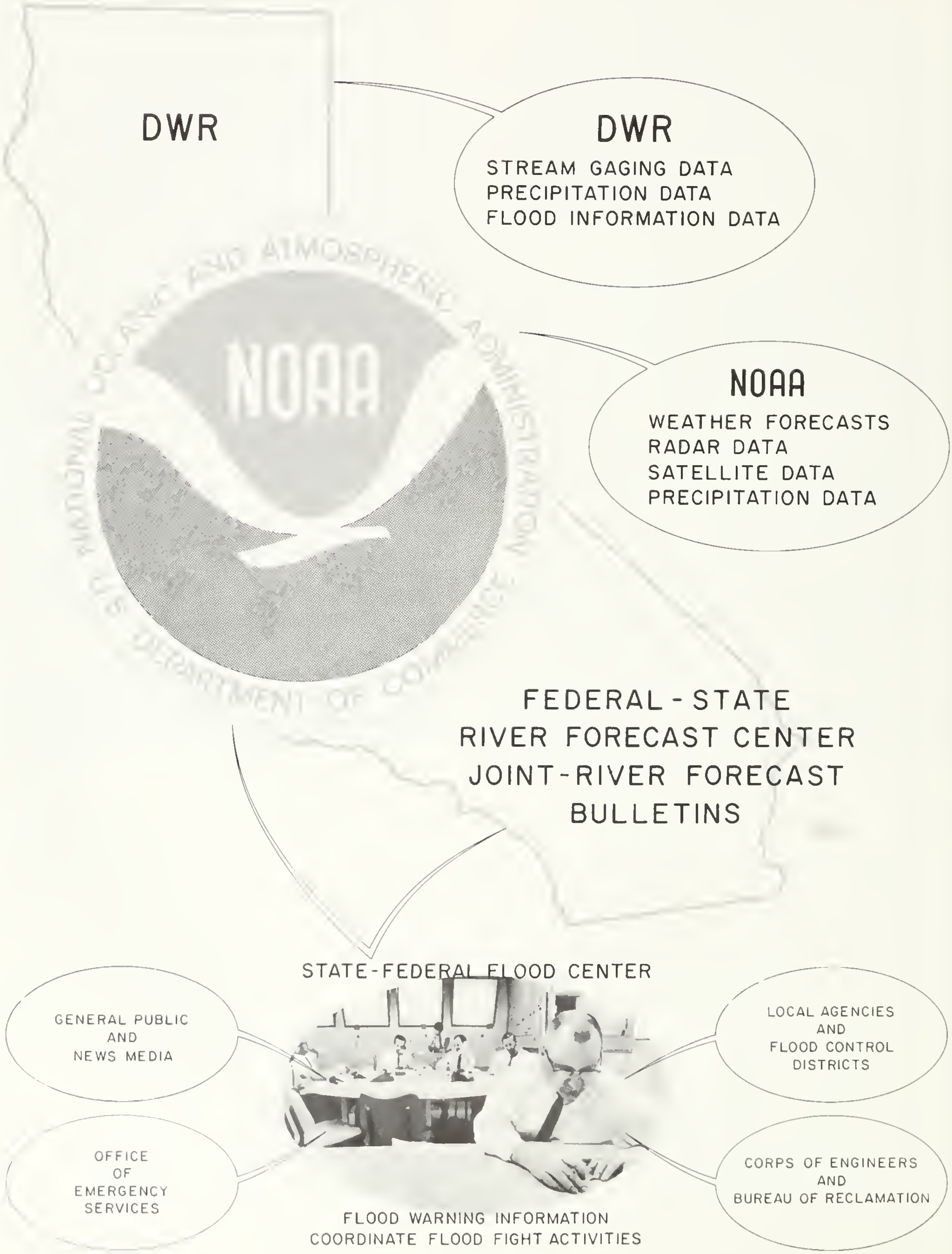
On February 9, 1971, the South Coastal Area experienced a devastating earthquake centered near the San Fernando Valley. Extensive damage occurred as far away as southern Los Angeles. Several major structures, including hospitals, were damaged or destroyed, roads were closed, and 65 lives lost. The earthquake also severed communications and power transmission and interrupted water service and other public facilities.

Three dams in the San Fernando Valley were impaired by the tremors. Pacoima Dam, on the Pacoima River in eastern San Fernando Valley, was damaged slightly, and the two dams in the northern end containing the Van Norman Lakes -- the Upper San Fernando Dam and the Lower San Fernando Dam -- were damaged severely. Damage to the Lower San Fernando Dam was so extensive that 80,000 valley residents were evacuated until the reservoir had been drained.

Storms in the South Coastal Area were light for the remainder of the water year and no flooding occurred. Precipitation and runoff were below normal.

Figure 15

FEDERAL STATE COOPERATIVE



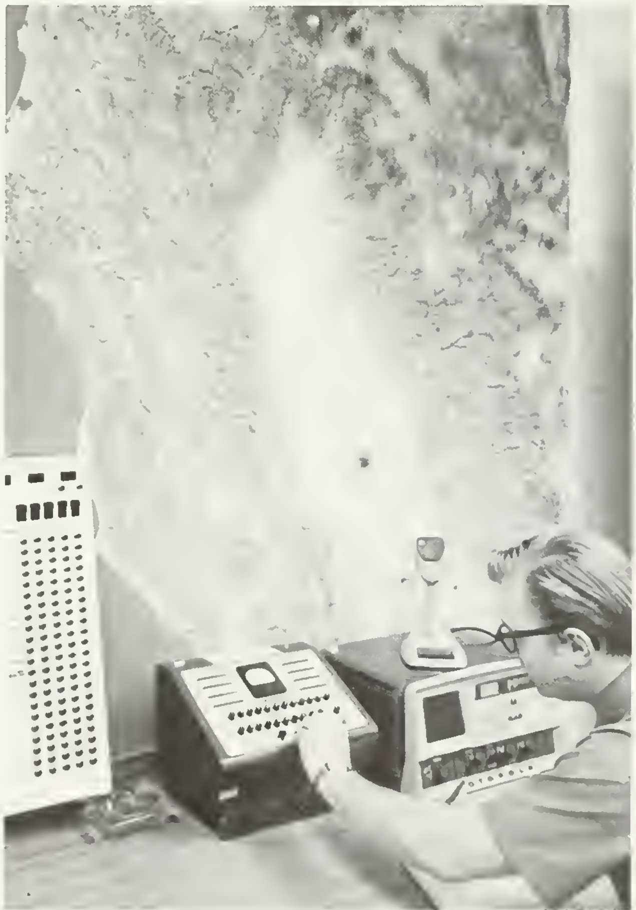
STATE-FEDERAL FLOOD OPERATIONS CENTER

Floods in California were uncontrolled until, shortly after the first gold miners arrived in 1849, when levees were built to protect property. As the levees went higher, the river stages also went higher because the flows were constricted to smaller areas; inevitably, the owner with the lowest levee was flooded. In the early 1900s, a coordinated effort was started to solve this common problem. With federal help, levees were built, bypasses constructed, and large dams erected to hold back the flood waters. The work started then has continued to the present and floods have been controlled with increasing success.

However, the disastrous floods of Christmas, 1955, demonstrated the need for a central organization to assemble in one location all pertinent flood information, such as rainfall, river stages, and reservoir operation. The organization would coordinate forecasts of river stages and provide information to all agencies associated with a flood emergency. By the end of 1956, the Federal Government and the State of California had come to agreement and the cooperative Flood Operations Center was established in Sacramento.

Storms during the first half of 1958 tested the Center's capability with six weeks of flooding and flood fighting. The Center functioned extremely well during that first test and has become more efficient through additional experience since that time. The large floods of 1964, 1969 and 1970 have been fought successfully, with the Center providing the nucleus for information, data, and assistance.

The Flood Operations Center consists of the National Weather Service and River Forecast Center as the federal agencies, and the Flood Forecasting and Operations Branch of the Department of Water Resources as the state agency. Its function is to provide all necessary liaison in a developing flood situation.



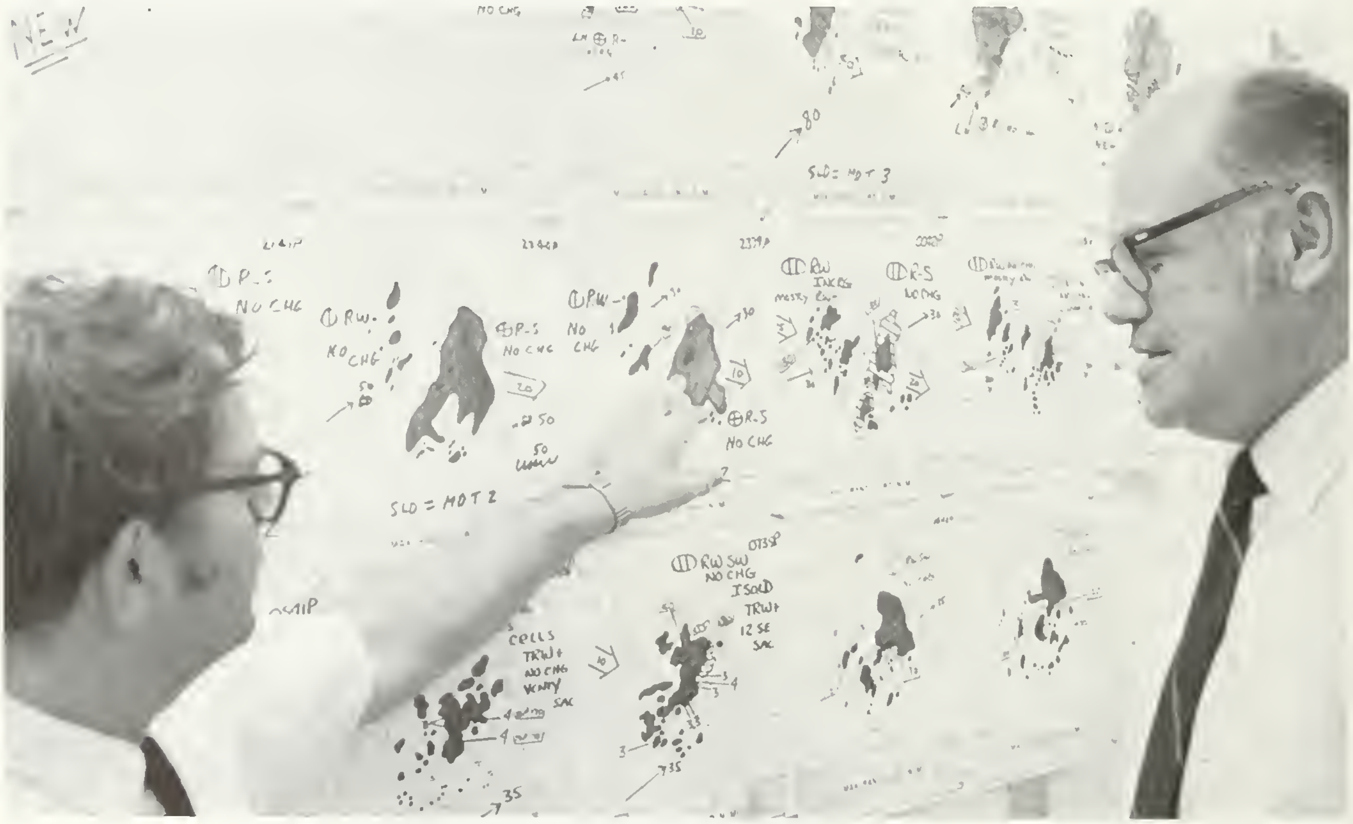
DWR PHOTO No. 4085-4

River stage and rain gages throughout the State are interrogated by radio to obtain current storm data. Map shows gage locations.

The Sacramento Weather Office of the National Weather Service, adjoining the Center, is equipped to receive weather data by teletype messages, facsimile weather forecast maps, and satellite pictures. Radar having a 180-mile range is operated continuously during storm periods. This facility plus other radar facilities gives forecasters an up-to-the-minute view of storm location and intensity.

The Flood Operations Center contains a data collection facility that uses several radio and telephone systems to collect real-time data on river stages and rainfall. One radio system monitors the American and Cosumnes River Basins, obtaining data on rainfall, temperature, and water content of the snow; a second system collects rainfall and river stage data in the Central Valley from Redding to Fresno; and a third system automatically monitors the North Coastal Area from Oregon to Napa, collecting river stage and rainfall data. This North Coast system is also equipped with a readout facility in the Eureka office of the National Weather Service that provides the latest data for local operations and acts as a back-up in case the Flood Center's facility malfunctions. Data is also collected on river stages and rainfall by telephone throughout the State.

Information is obtained from all principal reservoirs in the State on amount of inflow, amount of storage, stage of the reservoir, and present and planned downstream releases. All these data are compiled daily; during periods of flooding or potential flooding, they are collected hourly around the clock.



DWR PHOTO No. 4085-3

Weather and river forecasters review radar overlays depicting a storm situation to check the extent of rainfall.

Reservoir releases are under the jurisdiction of reservoir owners and the Center cannot direct changes. However, the Center is a source of information on river conditions that assist reservoir operators in regulating reservoir operation.

The Flood Operations Center is on alert status from the middle of October to the middle of May. Men from the Center are assigned on a rotating basis to keep continuous watch on the weather and rivers.

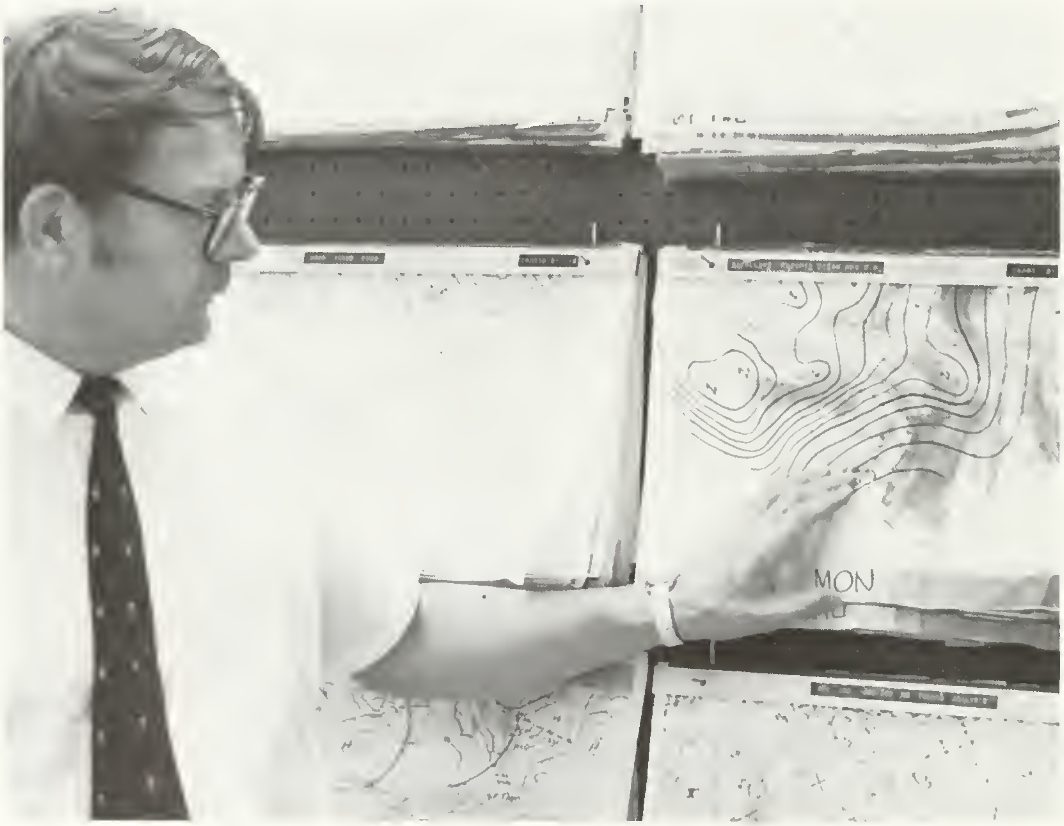
DWR Photo No. 4085-2

River forecasters assemble storm and river data to forecast expected river stages.

All data collected by the National Weather Service and the Flood Operations Center are used to make a joint forecast of the expected river stages at several points along a river. Forecasts are updated as conditions change until the danger has passed. After the forecast is prepared, it is issued to the responsible agencies and to the public. Forecasts are disseminated by teletype, radio, telephone, television, and newspaper.

As a flood situation develops, the Center is manned 24 hours a day. Members of the Department's levee maintenance inspection team maintain liaison with the reclamation and levee districts. Additional help is provided by specially trained personnel who are assigned from other offices of the Department of Water Resources. Liaison personnel from the Corps of Engineers and the Bureau of Reclamation move into the Center to keep their offices fully informed. Other Department personnel are dispatched to the flooded areas.

In a flood emergency, all operations are coordinated through the Flood Operations Center. The Center is equipped to communicate by radio with mobile units at the flood sites. All calls for men, material, and equipment are ordered through the Center. When more men are needed on the levees, the Center calls for specially trained inmates of the Division of Forestry Conservation Camps. After the floods have passed, the Center returns to normal routine.



When forecasts are complete, Flood Operations personnel inform other agencies that will be affected by high water.

DWR PHOTO NO. 4085-1

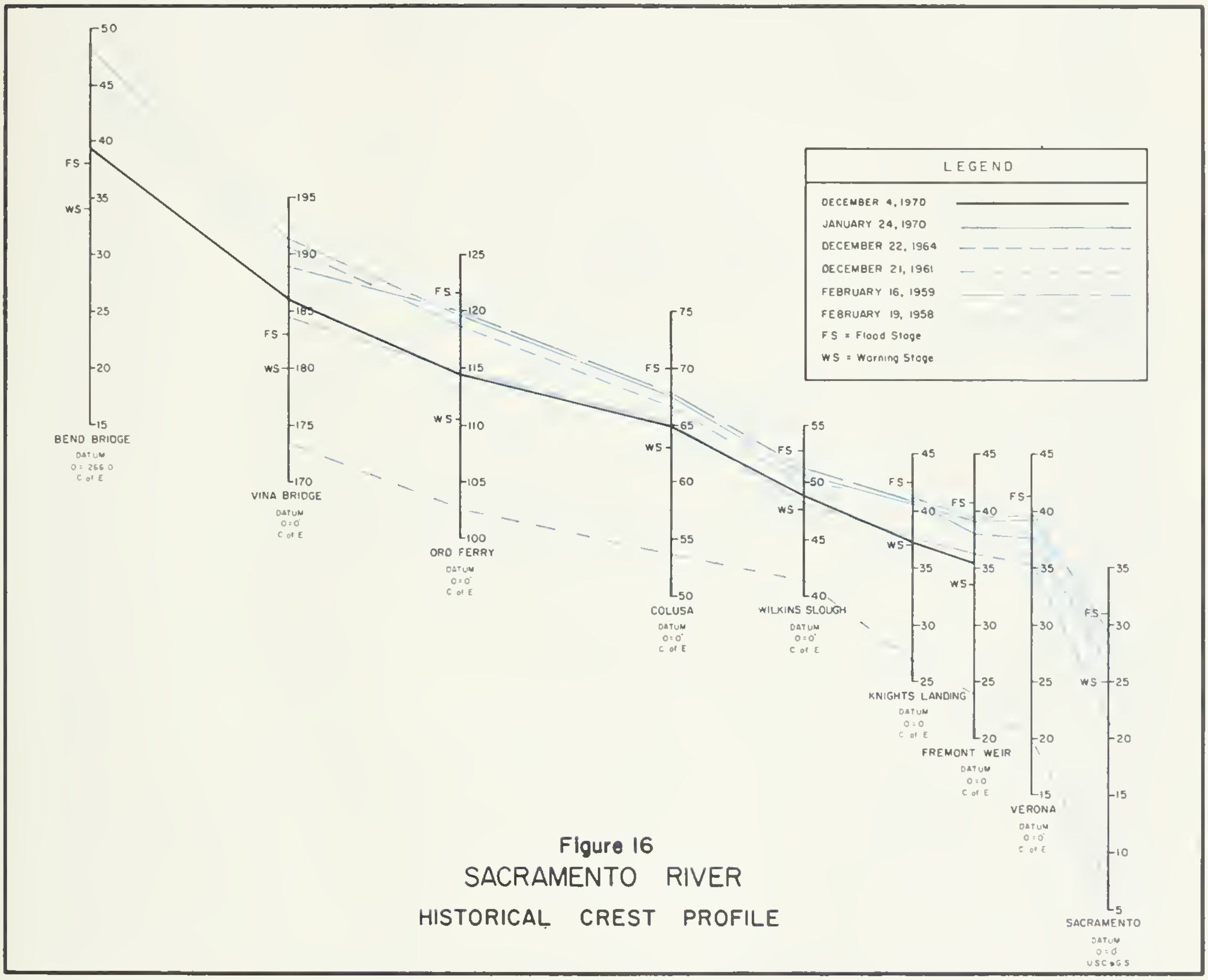
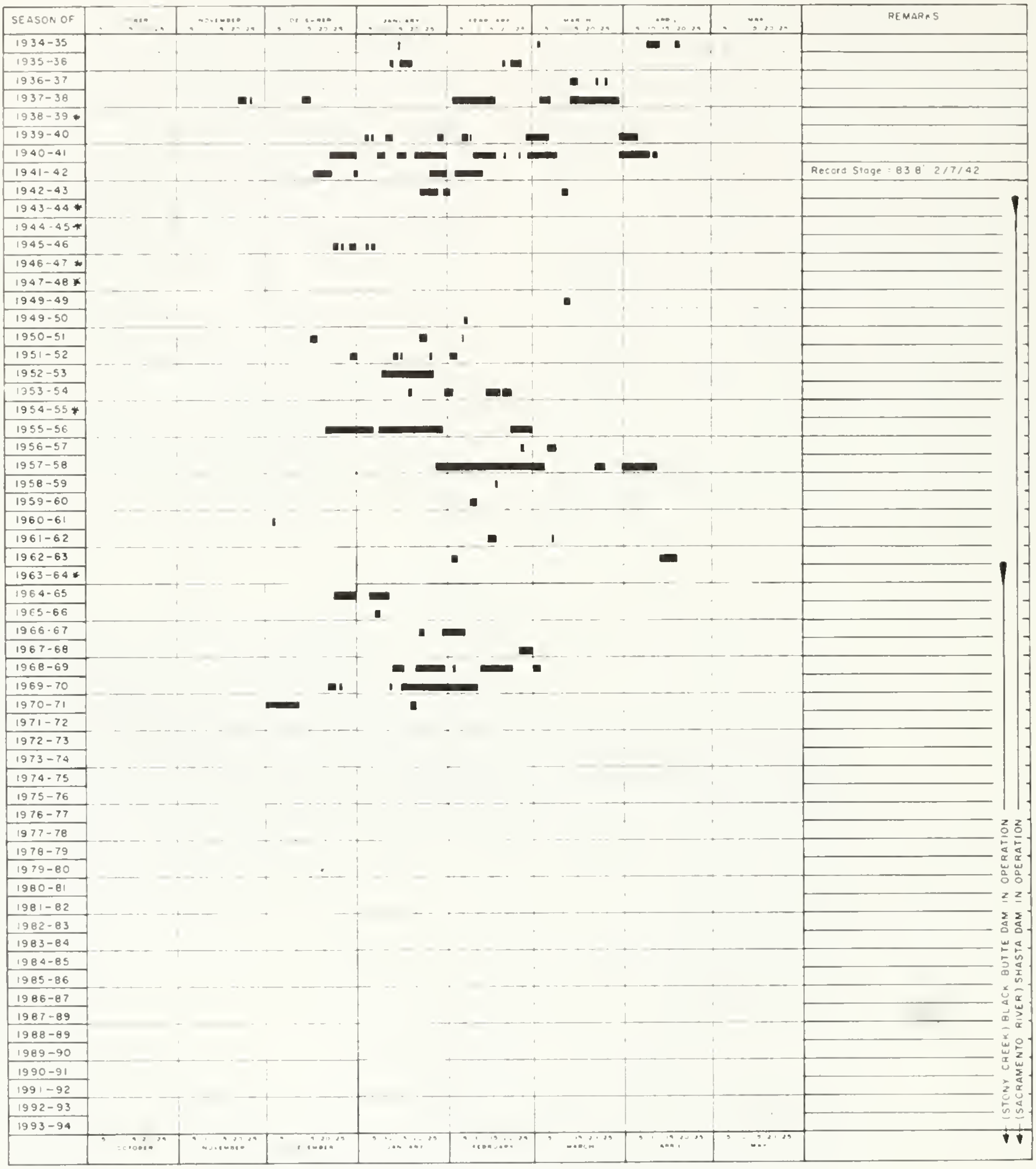


Figure 16
SACRAMENTO RIVER
HISTORICAL CREST PROFILE

Figure 17

PERIOD OF RECORD OF OVERFLOW OF THE MOULTON WEIR



NOTE

Data compiled from records of D.W.R. stream gaging station "Sacramento River at Moulton Weir"

Datum: 0=0' U.S.E.D.

Period of record 1935 to present

Crest elevation = 76.75 feet

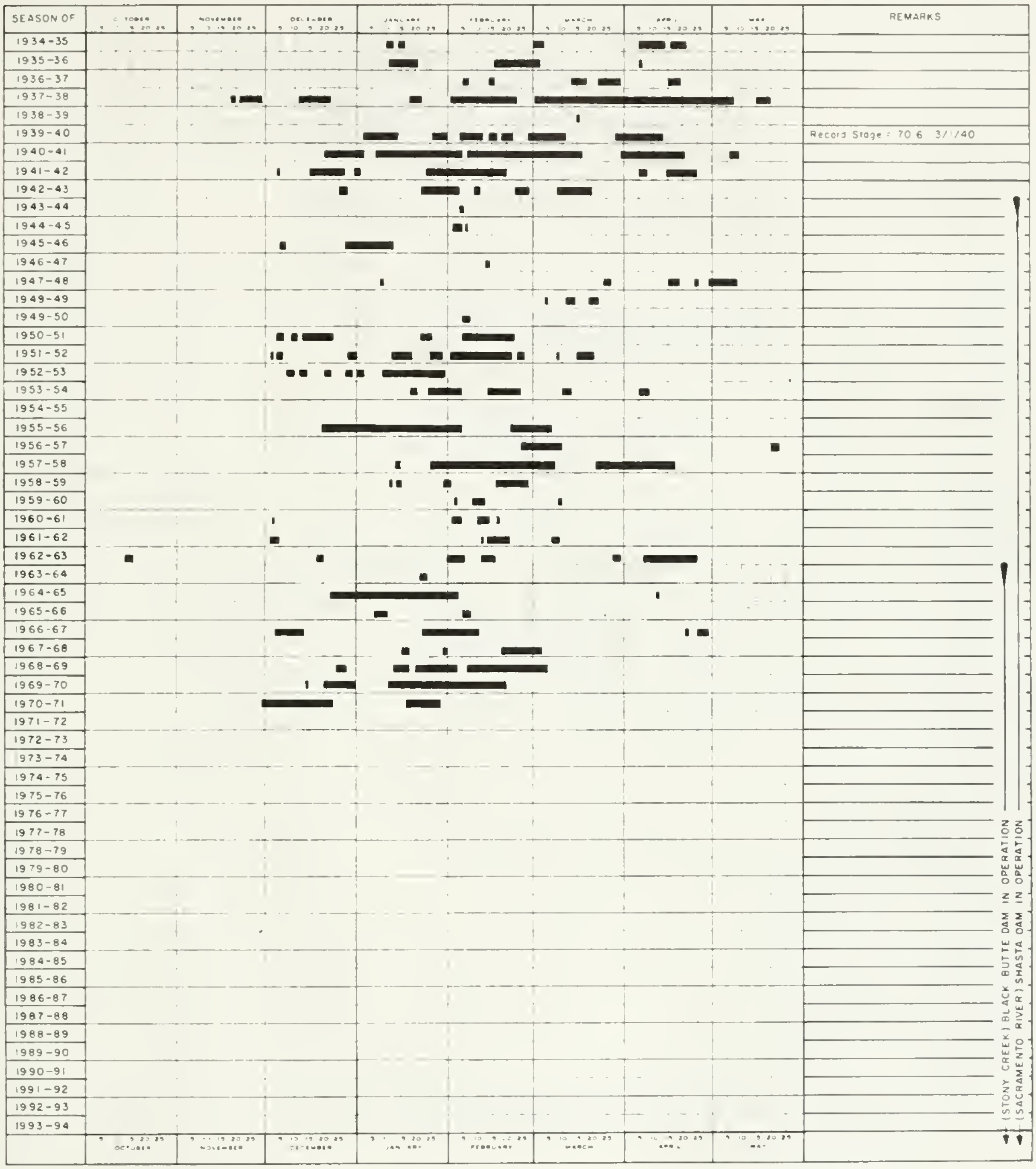
LEGEND

▬ Designates periods of flow over weir

* Designates season of no flow

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

Figure 18
PERIOD OF RECORD OF OVERFLOW OF THE COLUSA WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento River at Colusa Weir"

Datum: 0 = 0' U.S.E.D.

Period of record 1935 to present

Crest elevation = 61.80 feet

LEGEND

Designates periods of flow over weir

Designates season of no flow

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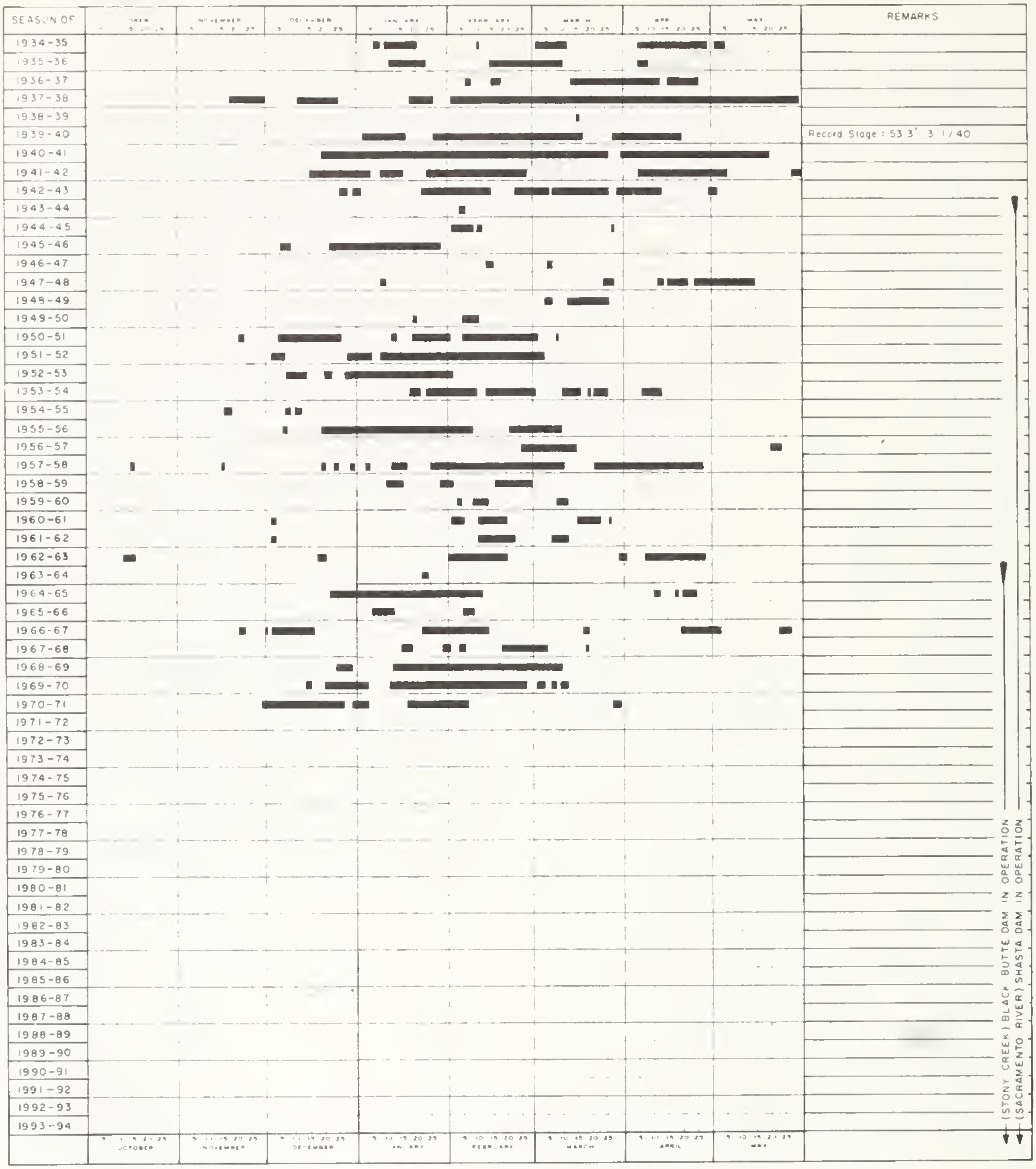
Figure 19

PERIOD OF RECORD OF OVERFLOW OF THE TISDALE WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento River at Tisdale Weir"

Datum: 0=0' U.S.E.D.

Period of record 1935 to present

Crest elevation = 45.45 feet

LEGEND

▬ Designates periods of flow over weir

■ Designates season of no flow

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

Figure 20
PERIOD OF RECORD OF OVERFLOW OF THE FREMONT WEIR

NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento River at Fremont Weir, West End"

Datum: 0=0' U.S.E.D.

Period of record 1934 to present

Crest elevation = 33.50 feet

LEGEND

▬ Designates periods of flow over weir

• Designates season of no flow

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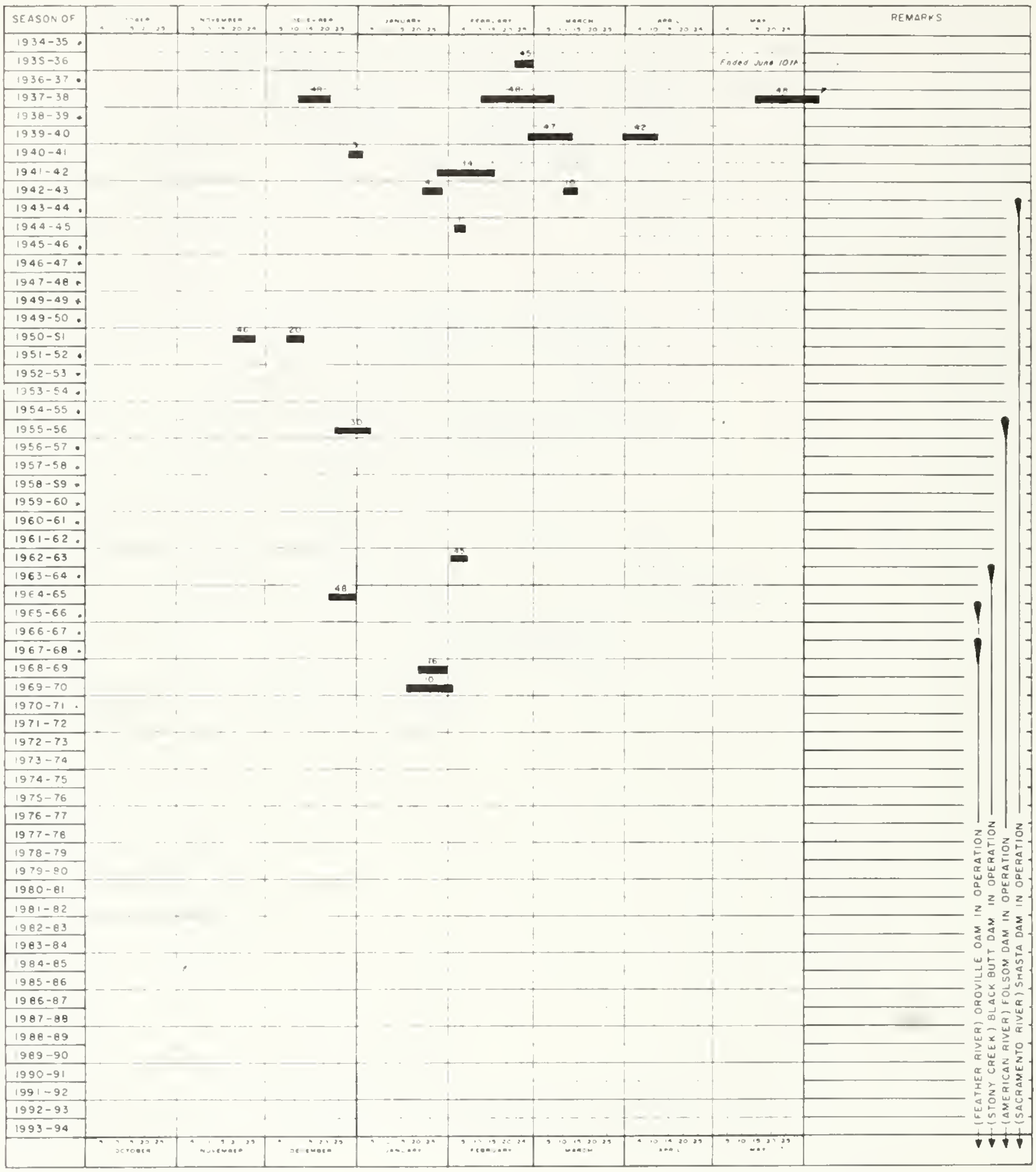
DEPARTMENT OF WATER RESOURCES

Figure 21
PERIOD OF RECORD OF OVERFLOW OF THE SACRAMENTO WEIR



NOTE:

Data compiled from records of D.W.R. stream gaging station "Sacramento Weir Spill to Yolo Bypass, near Sacramento

Datum: 0=0' U.S.E.D.

Period of record 1926 to present

Crest elevation = 24.75 feet

Elevation of top of gates = 31.0 feet

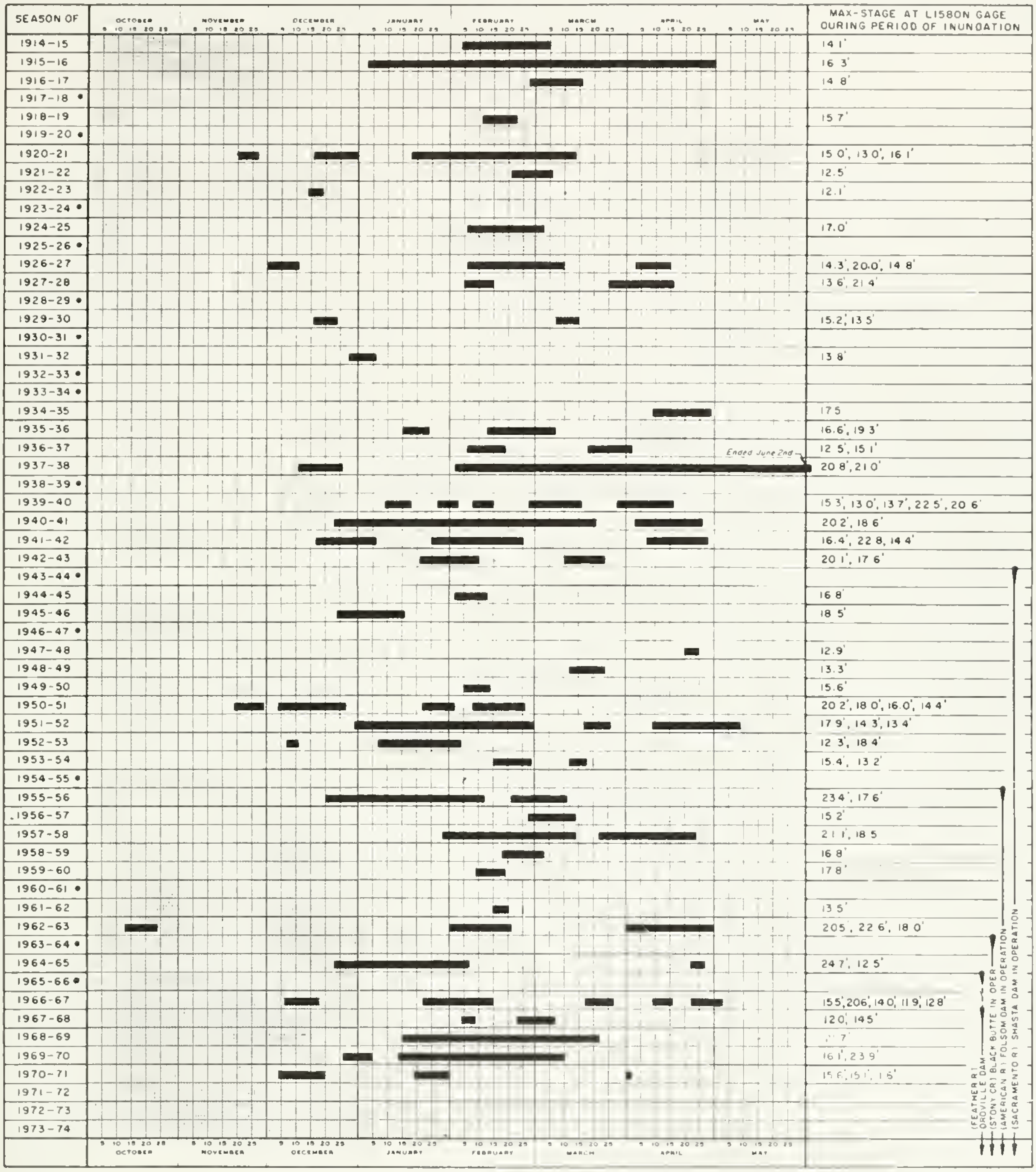
LEGEND

5 — Designates periods of flow over weir and total number of gates opened

• Designates season of no flow

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

Figure 22
PERIOD OF RECORD OF INUNDATION OF THE YOLO BYPASS



NOTE

Data compiled from records of D.W.R. stream gaging station "Yolo Bypass near Lisbon."

Datum: 0=U.S.E.D. Datum

Period of Record 1914 to Present

Assumed overflow of Bypass at stage above 11.5' on the Lisbon gage

LEGEND

▬ Designates period of inundation of Bypass

• Designates season Bypass not inundated

STATE OF CALIFORNIA
THE RESOURCES AGENCY
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TABLE 3

PEAK FLOWS AND STAGES
(PRELIMINARY DATA-SUBJECT TO REVISION)

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
NORTH COASTAL AREA									
SMITH RIVER BASIN									
SMITH RIVER NEAR CRESCENT CITY	609	1931-	USGS	12-22-64	48.5	228,000	1-16-71	36.58	128,000
KLAMATH RIVER BASIN									
SHASTA RIVER NEAR YREKA	793	1933-41 1944-	USGS	12-22-64 12-22-64	12.9 13.9(A)	21,500 - -	3-26-71	5.66	1,430
SCOTT RIVER NEAR FORT JONES	653	1941-	USGS	12-22-64	25.3(AC)	54,600	1-10-71	17.63	16,300
KLAMATH RIVER NEAR SEIAD VALLEY	6980	1912-25 1951-	USGS	12-23-64	33.8(A)	165,000	1-18-71	18.50	46,700
SALMON RIVER AT SOMESBAR	751	1911-15 1927-	USGS	12-22-64	46.6(A)	133,000	1-18-71	23.23	65,500
KLAMATH RIVER AT ORLEANS	8475	1927-	USGS	12-22-64	76.5(AC)	307,000	1-17-71	30.96	190,000
TRINITY RIVER ABOVE COFFEE CREEK NEAR TRINITY CENTER	149	1957-	USGS	12-22-64 12-22-64	12.3 13.4(A)	20,800 - -	5 -6-71	6.19	3,270
TRINTIY RIVER AT LEWISTON	728	1911-	USGS	12-22-55	27.3(AC)	71,600	5 -9-71	4.48	860
NORTH FORK TRINITY RIVER AT HELENA	151	1911-13 1957-	USGS-DWR	12-22-64	27.9(A)	35,800	1-17-71	18.7	11,500
TRINITY RIVER NEAR BURNT RANCH	1439	1931-40 1956-	USGS	12-22-55	43.2(A)	172,000	1-17-71	17.01	25,000
HAYFORK CREEK NEAR HYAMPOM	378	1953-	USGS	12-22-64	19.1	28,800	1-16-71	15.60	18,200
WILLOW CREEK NEAR WILLOW CREEK	41	1959-	USGS	12-22-64	20.6(A)	17,000	11-24-70	8.18	2,410
TRINITY RIVER AT HOOPA	2865	1911-14 1916-18 1931-	USGS	12-22-64	40.3(AC)	231,000	1-18-71	37.42	79,000
KLAMATH RIVER NEAR KLAMATH	12100	1910-26 1950-	USGS	12-23-64	55.3(A)	557,000	1-18-71	36.4	334,000
REDWOOD CREEK BASIN									
REDWOOD CREEK AT ORICK	278	1911-13 1953-	USGS	12-22-64	24.0(A)	50,500	11-24-70	18.70	30,500
LITTLE RIVER BASIN									
LITTLE RIVER AT CRANNEL	44	1955-	USGS	1- 4-66 1-17-53	11.1 15.7(A)	8,300 - -	11-24-70	11.48	8,630 *
MAD RIVER BASIN									
MAD RIVER NEAR FOREST GLEN	143	1953-	USGS	12-22-55	24.5(A)	39,200	1-16-71	11.52	10,600
MAD RIVER NEAR ARCATA	485	1910-13 1950-	USGS	12-22-55	29.8	77,600	1-16-71	17.15	29,200
EEL RIVER BASIN									
EEL RIVER BELOW SCOTT DAM NEAR POTTER VALLEY	290	1922-	USGS	12-22-64	24.2(A)	56,300	1-16-71	16.49	17,400
EEL RIVER AT VAN ARSDALE DAM NEAR POTTER VALLEY	349	1909-	USGS	12-22-64	33.9(A)	64,100	1-16-71	21.12	22,400
OUTLET CREEK NEAR LONGVALE	161	1956-	USGS	12-22-64	30.6(A)	77,900	1-16-71	15.73	16,400
BLACK BUTTE RIVER NEAR COVELO	162	1951-	USGS	12-22-64 12-11-37	26.4(A) 36.2(AC)	29,000 - -	12 -3-70	19.79	7,530

Legend to Table 3 appears on page 51.

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
NORTH COASTAL AREA (CONTINUED)									
EEL RIVER BASIN (CONTINUED)									
NORTH FORK EEL RIVER NEAR MINA	248	1953-	USGS	12-22-64	33.6(A)	133,000	12 -3-70	20.23	29,900
EEL RIVER AT FORT SEWARD	2107	1955-	USGS	12-22-64	87.2(AC)	561,000	1-16-71	42.54	162,000
SOUTH FORK EEL RIVER NEAR BRANSCOMB	44	1946-	USGS	12-22-55	16.2	20,100	STATION DISCONTINUED		
TENMILE CREEK NEAR LAYTONVILLE	50	1957-	USGS	12-22-55	22.9(A)	16,300	12 -3-70	14.20	6,100
SOUTH FORK EEL RIVER NEAR MIRANDA	537	1939-	USGS	12-22-64	46.0(A)	199,000	12 -3-70	29.16	92,400
BULL CREEK NEAR WEOTT	28	1960-	USGS	12-22-64	20.6(AC)	6,520	12 -3-70	11.01	2,610
EEL RIVER AT SCOTIA	3113	1910-	USGS	12-23-64	72.0(A)	752,000	1-17-71	41.77	240,000
VAN DUZEN RIVER NEAR BRIDGEVILLE	222	1950-	USGS	12-22-64	24.0(A)	48,700	12 -3-70	17.86	26,600
MATTOLE RIVER BASIN									
MATTOLE RIVER NEAR PETROLIA	240	1911-13 1915-	USGS	12-22-55	29.6(C)	90,400	12 -3-70	20.70	46,900
NOYO RIVER BASIN									
NOYO RIVER NEAR FORT BRAGG	106	1951-	USGS	12-22-64	26.3	24,000	12 -4-70	19.98	9,080
NAVARRO RIVER BASIN									
NAVARRO RIVER NEAR NAVARRO	303	1950-	USGS	12-22-55	40.6(C)	64,500	1-16-71	24.00	20,000
GUALALA RIVER BASIN									
SOUTH FORK GUALALA RIVER NEAR ANNAPOLIS	161	1950-	USGS	12-22-55	24.6(C)	55,000	12 -3-70	18.20	28,600
RUSSIAN RIVER BASIN									
RUSSIAN RIVER NEAR UKIAH	100	1911-13 1952-	USGS	12-21-55	21.0	18,900	12 -3-70	11.96	9,360
EAST FORK RUSSIAN RIVER NEAR CALPELLA	92	1941-	USGS	12-22-64	20.2	18,700	1-16-71	18.48	8,980
RUSSIAN RIVER NEAR HOPLAND	362	1939-	USGS	12-22-55 12- -37	27.0 30.0(A)	45,000 - -	1-16-71	18.76	20,000
RUSSIAN RIVER NEAR CLOVERDALE	503	1951-	USGS	12-22-64	31.6(C)	55,200	12 -4-70	18.92	25,000
BIG SULPHUR CREEK NEAR CLOVERDALE	82	1957-	USGS	12-22-55	16.8(A)	20,000	12 -3-70	11.28	9,160
RUSSIAN RIVER NEAR HEALDSBURG	793	1939-	USGS	12-23-64 12- -37	27.0 30.8(A)	71,300 - -	12 -4-70	18.84	40,200
DRY CREEK NEAR CLOVERDALE	88	1941-	USGS	12-22-64	18.1	18,100	12 -3-70	11.15	7,450
DRY CREEK NEAR GEYSERVILLE	162	1959-	USGS	1-31-63	17.5	32,400	12 -3-70	12.68	14,700
SANTA ROSA CREEK NEAR SANTA ROSA	13	1959-	USGS	2- 8-60	13.4(A)	3,200	STATION DISCONTINUED		
RUSSIAN RIVER NEAR GUERNEVILLE (SUMMERHOME)	1340	1939-	USGS	12-23-64 12-23-55	49.6(A) 49.7(A)	93,400 - -	12 -4-70	39.33	59,800

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
SAN FRANCISCO BAY AREA									
WALKER CREEK BASIN									
WALKER CREEK NEAR TOMALES	37	1959-	USGS	1- 5-66	22.2	5,420	12 -4-70	18.65	3,290
CORTE MADERA CREEK BASIN									
CORTE MADERA CREEK AT ROSS	18	1951-	USGS	12-22-55	17.5	3,620	12 -3-70	15.11	2,640
NOVATO CREEK BASIN									
NOVATO CREEK NEAR NOVATO	18	1946-	USGS	1-14-70	11.0	2,000	11-27-70	6.82	700
SONOMA CREEK BASIN									
SONOMA CREEK AT AGUA CALIENTE	58	1955-	USGS	12-22-55	17.1(C)	8,880	12 -3-70	15.26	8,410
NAPA RIVER BASIN									
NAPA RIVER NEAR ST. HELENA	81	1929-32 1939-	USGS	12-22-55	16.2	12,600	12 -3-70	14.00	9,700
NAPA RIVER NEAR NAPA	218	1929-32 1959-	USGS	1-31-63	27.6	16,900	12 -4-70	20.13	12,200
REDWOOD CREEK NEAR NAPA	10	1958-	USGS	1- 5-65	10.4	1,450	11-27-70	8.52	1,400
PACHECO CREEK BASIN									
SAN RAMON CREEK AT SAN RAMON	6	1952-	USGS	10-13-62	17.0	1,600	12 -4-70	3.84	220
SAN LORENZO CREEK BASIN									
SAN LORENZO CREEK AT HAYWARD	38	1939-40 1946-	USGS	10-13-62 12-22-55	19.7(A) 20.8(A)	7,460 - -	12 -4-70	10.01	1,260
ALAMEDA CREEK BASIN									
ARROYO MOCHO NEAR PLEASANTON	141	1962-	USGS	2- 1-63	8.60(C)	1,760	11-29-70	12.50	620
ARROYO VALLE NEAR LIVERMORE	147	1912-30 1957-	USGS	12-23-55	13.9(A)	18,200	11-13-70	3.04	80
ARROYO VALLE AT PLEASANTON	171	1957-	USGS	4- 3-58	25.4	11,300	11-11-70	8.33	80
ALAMEDA CREEK NEAR NILES	633	1891-	USGS	12-23-55	14.9	29,000	12 -2-70	6.26	2,230
PATTERSON CREEK AT UNION CITY	--	1958-	USGS	2- 1-63	20.4(A)	10,500	11-29-70	13.90	5,300
ALAMEDA CREEK AT UNION CITY	653	1958-	USGS	2- 1-63	19.3(A)	1,770	11-29-70	11.39	50
COYOTE CREEK BASIN									
COYOTE CREEK NEAR MADRONE	196	1902-12 1916-	USGS	3- 7-11	- -	25,000	9-28-71	2.48	90
UPPER PENITENCIA CREEK AT SAN JOSE	22	1961-	USGS	1-21-67	6.2	15,000	12 -2-70	4.94	520
GUADALUPE RIVER BASIN									
ALAMITOS CREEK NEAR NEW ALMADEN	32	1958-	USGS	4- 2-58	9.7	4,300	12 -2-70	4.28	1,120
LOS GATOS CREEK AT LOS GATOS	39	1929-44 1953-	USGS	2-27-40	14.7(C)	7,110	8-24-71	4.67	60
GUADALUPE RIVER AT SAN JOSE	144	1929-	USGS	4- 2-58	16.6	9,150	11-29-70	6.55	3,260
SARATOGA CREEK AT SARATOGA	9	1933-	USGS	12-22-55	6.4(C)	2,730	11-28-70	4.39	260
MATADERO CREEK BASIN									
MATADERO CREEK AT PALO ALTO	7	1952-	USGS	12-22-55	9.6	854	12-20-70	3.20	390

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
SAN FRANCISCO BAY AREA (CONTINUED)									
SAN FRANCISQUITO CREEK BASIN									
SAN FRANCISQUITO CREEK AT STANFORD UNIVERSITY	38	1930-41 1950-	USGS	12-22-55	13.6	5,560			NO PEAK
CENTRAL COASTAL AREA									
REDWOOD CREEK BASIN									
REDWOOD CREEK AT REDWOOD CITY	2	1959-	USGS	1-31-63	9.4	644	12-20-70	5.82	270
PESCADERO CREEK BASIN									
PESCADERO CREEK NEAR PESCADERO	46	1951-	USGS	12-23-55	21.3	9,420	12-29-70	6.25	770
SAN LORENZO RIVER BASIN									
SAN LORENZO RIVER AT BIG TREES	111	1936-	USGS	12-23-55	22.6	30,400	11-29-70	7.12	2,530
SOQUEL CREEK BASIN									
SOQUEL CREEK AT SOQUEL	40	1951-	USGS	12-23-55	22.3	15,800	11-29-70	7.06	1,300
PAJARO RIVER BASIN									
BODFISH CREEK NEAR GILROY	7	1959-	USGS	1-31-63	8.3	1,240	11-29-70	3.84	60
TRES PINOS CREEK NEAR TRES PINOS	206	1939-	USGS	4- 4-41	7.8	8,060	12-21-70	4.99	220
SAN BENITO RIVER NEAR HOLLISTER	586	1949-	USGS	4- 3-58	16.3	11,600	11-29-70	6.09	520
PAJARO RIVER AT CHITTENDEN	1186	1939-	USGS	12-24-55 4- 3-58	32.5 33.1	24,000	12-21-70	6.51	970
CORRALITOS CREEK NEAR CORRALITOS	11	1957-	USGS	4- 2-58	7.6	1,970	11-29-70	3.72	250
CORRALITOS CREEK AT FREEDOM	28	1956-	USGS	12-22-55	15.6(A)	3,620	11-29-70	5.07	430
SALINAS RIVER BASIN									
SALINAS RIVER NEAR POZO	70	1942-	USGS	1-25-69 1-25-69	13.9 15.5(A)	18,600	12-21-70	11.86	310
SALINAS RIVER ABOVE PILITAS CREEK NEAR SANTA MARGARITA	114	1942-	USGS	1-25-69	14.9	16,600	12-21-70	1.42	90
JACK CREEK NEAR TEMPLETON	25	1949-	USGS	2-24-69	11.3	8,160	12-21-70	6.10	1,210
ESTRELLA RIVER NEAR ESTRELLA	922	1954-	USGS	2-24-69	10.4(A)	32,500	12-23-70	2.55	55
NACIMIENTO RIVER NEAR BRYSON	140	1955-	USGS	1-25-69	24.6	39,100	11-28-70	15.28	14,400
SALINAS RIVER NEAR BRADLEY	2535	1948-	USGS	2-24-69	20.3(A)	117,000	3 -5-71	7.20	2,380
ARROYO SECO NEAR SOLEDAD	244	1901-	USGS	4- 3-58	16.4	28,300	11-29-70	8.45	4,300
SALINAS RIVER NEAR SPRECKELS	4156	1900-01 1929-	USGS	2-26-69 1-16-52	26.5(C) 26.9(A,C)	83,100 - -	11-30-70	8.00	2,080
CARMEL RIVER BASIN									
CARMEL RIVER AT ROBLES DEL RIO	193	1957-	USGS	4- 2-58 12-23-55	10.5 11.7(A)	7,100 6,930	12 -2-70	6.53	1,170
BIG SUR RIVER BASIN									
BIG SUR RIVER NEAR BIG SUR	47	1950-	USGS	4- 2-58	11.6	5,680	11-29-70	6.80	1,600

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
CENTRAL COASTAL AREA (CONTINUED)									
ARROYO DE LA CRUZ BASIN									
ARROYO DE LA CRUZ NEAR SAN SIMEON	41	1950-	USGS	12- 6-66	15.3	35,200	11-28-70	7.61	4,000
SANTA ROSA CREEK BASIN									
SANTA ROSA CREEK NEAR CAMBRIA	13	1957-	USGS	1-25-69 12- -55	12.0 15.2(A)	3,350 - -	11-29-70	6.13	640
SANTA MARIA RIVER BASIN									
SISQUOC RIVER NEAR GAREY	471	1940-	USGS	1-25-69	13.0	24,500	11-29-70	7.63	2,000
SANTA MARIA RIVER AT GUADALUPE	1741	1940-	USGS	1-16-52	8.2(C)	32,800			NO PEAK
SANTA YNEZ RIVER BASIN									
SANTA YNEZ RIVER BELOW GIBRALTAR DAM NEAR SANTA BARBARA	216	1920-	USGS	1-25-69	25.8	54,200	5 -6-71	10.65	1,340
SANTA CRUZ CREEK NEAR SANTA YNEZ	74	1941-	USGS	2-24-69	14.5(A)	7,050	11-29-70	10.42	1,100
SAN JOSE CREEK BASIN									
SAN JOSE CREEK NEAR GOLETA	6	1941-	USGS	1-25-69 1-21-43	10.1 12.7	2,000 - -	11-29-70	4.07	260
ATASCADERO CREEK BASIN									
ATASCADERO CREEK NEAR GOLETA	19	1941-	USGS	1-25-69	13.0	5,230	11-29-70	11.30	2,500
CARPINTERIA CREEK BASIN									
CARPINTERIA CREEK NEAR CARPINTERIA	13	1941-	USGS	1-25-69	18.9(A)	4,560	11-29-70	4.60	220
VENTURA CREEK BASIN									
MATILIJA CREEK AT MATILIJA HOT SPRINGS	55	1927-	USGS	1-25-69	16.5	20,000	12 -1-70	4.20	520
VENTURA RIVER NEAR MEINERS OAKS	76	1959-	USGS	1-25-69	- -	28,000(E)	11-29-70	10.7	1,560
COYOTE CREEK NEAR OAK VIEW	13	1958-	USGS	1-25-69	12.0	8,000	11-29-70	8.96	1,430
VENTURA RIVER NEAR VENTURA	188	1911-14 1929-	USGS	1-25-69	24.3(A)	58,000	12-21-70	9.40	3,120
SANTA CLARA RIVER BASIN									
SAN CLARA RIVER AT LOS ANGELES-VENTURA CO. LINE	644	1952-	USGS	1-25-69	19.0	68,800	11-29-70	8.26	9,080
PIRU CREEK ABOVE LAKE PIRU	372	1955-	USGS	2-25-69	18.6(A)	31,200	11-29-70	11.03	9,860
SESPE CREEK NEAR FILLMORE	251	1911-13 1927-	USGS	1-25-69 2-25-69	20.8 25.0(A)	60,000 - -	11-29-70	20.42	22,800
SANTA PAULA CREEK NEAR SANTA PAULA	40	1927-	USGS	2-25-69	15.2(A)	21,000	11-29-70	7.96	2,530
SOUTH COASTAL AREA									
MALIBU CREEK BASIN									
MALIBU CREEK AT CRATER CAMP NEAR CALABASAS	105	1931-	USGS	1-25-69	21.4	33,800	12-19-70	11.45	7,390
BALLONA CREEK BASIN									
BALLONA CREEK NEAR CULVER CITY	90	1928-	USGS	11-21-67	14.9	32,500	11-29-70	9.50	14,600

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
SOUTH COASTAL AREA (CONTINUED)									
LOS ANGELES RIVER BASIN									
LOS ANGELES RIVER AT SEPULVEDA DAM	158	1929-	USGS	1-25-69	11.4	13,800	11-29-70	10.57	12,300
LOS ANGELES RIVER AT LOS ANGELES	514	1929-	USGS	3- 2-38	- -	67,000	11-29-70	12.18	41,500
RIO HONDO NEAR DOWNEY	143	1928-	USGS	1-25-69	15.2	46,900	11-29-70	6.18	9,350
SANTA ANA RIVER BASIN									
SANTA ANA RIVER NEAR MENTONE	209	1896-	USGS	3- 2-38	14.3(C)	52,300	11-29-70	8.2	6,600
SAN GABRIEL RIVER BELOW SANTA FE DAM NEAR BALDWIN PARK	236	1942-	USGS	1-26-69	22.2	30,900	12-17-70	10.68	125
SANTA ANA RIVER AT 'E' ST NEAR SAN BERNARDINO	532	1939-54 1966-	USGS	2-25-69	16.5	28,000	11-29-70	8.37	3,440
MILL CREEK NEAR YUCAIPA	42	1919-38 1947-	USGS	1-25-69	16.8(A)	35,400	11-29-70	8.60	1,200
LYTLE CREEK NEAR FONTANA	46	1918-	USGS	1-25-69	15.0(A)	35,900	11-29-70	7.50	1,100
CAJON CREEK NEAR KEENBROOK	41	1919-	USGS	3- 2-38	26.0(C)	14,500	11-29-70	7.50	1,300
SANTA ANA RIVER AT RIVERSIDE NARROWS NEAR ARLINGTON	855	1927-	USGS	3- 2-38	- -	100,000	11-29-70	9.77	5,300
SAN JACINTO RIVER NEAR SAN JACINTO	141	1920-	USGS	2-16-27	- -	45,000	11-29-70	8.92	45
SANTIAGO CREEK AT MODJESKA	13	1961-	USGS	2-25-69	6.2	6,520	12-21-70	2.93	60
SANTIAGO CREEK AT SANTA ANA	95	1928-	USGS	2-25-69 1-16-52	9.1(C) 9.8	6,600 - -	12-19-70	4.90	330
SAN JUAN CREEK BASIN									
SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO	106	1928-	USGS	2-25-69	5.6(A,C)	22,400	12-19-70	3.85	135
SANTA MARGARITA RIVER BASIN									
SANTA MARGARITA RIVER NEAR TEMECULA	588	1923-	USGS	2-16-27	14.6(C)	25,000	12-21-70	3.32	330
SANTA MARGARITA RIVER AT YSIDORA	739	1923-	USGS	2-16-27	18.0(C)	33,600			NO PEAK
SAN LUIS REY RIVER BASIN									
SAN LUIS REY RIVER AT MONSERATE NARROWS NR PALA	373	1935-41 1946-	USGS	2- 7-37	8.7(C)	- -			NO PEAK
SAN LUIS REY RIVER NEAR BONSALL	512	1916-18 1929-	USGS	3- 3-38	16.0	18,100	12-21-70	8.39	210
SAN DIEGUITO RIVER BASIN									
SANTA YSABEL CREEK NEAR RAMONA	112	1912-23 1943-	USGS	1-27-16	14.0(C)	28,400	1 -3-71	2.46	20
SANTA YSABEL CREEK NEAR SAN PASQUAL	128	1905-12 1947-	USGS	3-24-06	6.3(C)	8,000	1 -3-71	1.69	20
SAN DIEGO RIVER BASIN									
SAN DIEGO RIVER NEAR SANTEE	377	1912-	USGS	1-27-16	25.1(C)	70,200	12-21-70	5.66	790
SWEETWATER RIVER BASIN									
SWEETWATER RIVER NEAR DESCANSO	46	1905-27 1956-	USGS	2-16-27	13.2(A,C)	11,200	11-30-70	3.96	40
TIJUANA RIVER BASIN									
TIJUANA RIVER NEAR DULZURA	481	1936-	USGS	2- 7-37	8.5	4,700	12-21-70	2.85	50

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
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CENTRAL VALLEY AREA									
SACRAMENTO RIVER BASIN									
SACRAMENTO RIVER AT DELTA	425	1944-	USGS	12-22-64	20.1	38,800	3-26-71	11.26	11,000
PIT RIVER NEAR BIEBER	2475	1904-31 1951-	USGS	3-19-07	16.7	33,800	3-28-71	10.59	11,000
PIT RIVER BELOW PIT NO.4 DAM	4647	1922-	USGS	1-25-70	18.1	32,500(E)	3-27-71	13.85	13,000
MCCLOUD RIVER ABOVE SHASTA LAKE	604	1945-	USGS	12-22-55	28.2	45,200	3-26-71	16.56	7,300
SACRAMENTO RIVER AT KESWICK	6468	1938-	USGS-DWR	2-23-40	47.2(C)	186,000	12 -9-70	24.52	37,600
CLEAR CREEK AT FRENCH GULCH	115	1950-	USGS	12-22-64	13.7	7,600	1-16-71	10.07	3,800
CLEAR CREEK NEAR IGO	228	1940-	USGS	12-21-55	13.8	24,500	12-28-70	6.23	2,610
COW CREEK NEAR MILLVILLE	425	1949-	USGS	12-27-51	21.6	45,200	12 -4-70	16.64	30,000
COTTONWOOD CREEK NEAR COTTONWOOD	922	1940-	USGS	12-22-64	19.6	60,000	1-16-71	15.57	31,300
BATTLE CREEK BELOW COLEMAN FISH HATCHERY NEAR COTTONWOOD	358	1961-	USGS	12-11-37	15.8(AC)	35,000	11-28-70	8.06	6,490
SACRAMENTO RIVER AT BEND BRIDGE	--	1960-	DWR	1-24-70	48.3	158,000	12 -4-70	39.50	104,000
PAYNES CREEK NEAR RED BLUFF	93	1949-	USGS	12- 1-61	11.3	10,600	STATION DISCONTINUED		
RED BANK CREEK NEAR RED BLUFF	94	1948-	DWR	1- 5-65	10.1	9,730	1-16-71	7.04	1,600
ANTELOPE CREEK NEAR RED BLUFF	123	1940-	USGS	1-23-70	18.0	17,200	11-28-70	12.82	5,090
ELDER CREEK NEAR PASKENTA	93	1948-	USGS	2-24-58	13.9(C)	11,700	3-26-71	8.23	3,700
MILL CREEK NEAR LOS MOLINOS	131	1909-13 1928-	USGS	12-11-37	23.4(A)	36,400	12 -4-70	9.41	5,870
THOMES CREEK AT PASKENTA	194	1920-	USGS-DWR	12-22-64	15.3	37,800	3-26-71	9.62	9,360
DEER CREEK NEAR VINA	208	1911-15 1920-	USGS-DWR	12-10-37	19.2(A)	23,800	3-26-71	8.04	4,540
SACRAMENTO RIVER AT VINA BRIDGE	--	1945-	DWR	1-24-70 1-24-70	91.5 - -	171,000 228,000(L)	12 -4-70	86.03	109,000
SACRAMENTO RIVER AT HAMILTON CITY (BEFORE SHASTA DAM)	--	1927-43	DWR	12-11-37	150.7(C)	350,000(E,L)			
SACRAMENTO RIVER AT HAMILTON CITY (AFTER SHASTA DAM)	--	1944-	DWR	1-24-70	50.8	156,000	12 -4-70	45.28	101,000
BIG CHICO CREEK NEAR CHICO	72	1930-	USGS	1- 5-65	15.4	9,580	12 -4-70	9.17	3,840
STONY CREEK NEAR FRUTO	598	1901-12 1960-	USGS	12-23-64	15.9	40,200	1-16-71	11.89	14,400
STONY CREEK NEAR HAMILTON CITY	777	1940-	USGS	2-25-58	18.3	39,900	1-19-71	10.06	5,570
SACRAMENTO RIVER AT ORD FERRY (BEFORE SHASTA DAM)	--	1921-43	DWR	2-28-40	121.7	370,000(EL)			
SACRAMENTO RIVER AT ORD FERRY (AFTER SHASTA DAM)	--	1944-	DWR	1-24-70	119.79	265,000(E,L)	1-17-71	114.59	97,100(E)
SACRAMENTO RIVER AT BUTTE CITY (BEFORE SHASTA DAM)	--	1921-43	USGS-DWR	2- 7-42	96.9	170,000			

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CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
SACRAMENTO RIVER AT BUTTE CITY (AFTER SHASTA DAM)	--	1944-	USGS-DWR	2-20-58 1-24-70	96.7 - -	160,000 225,000(L)	1-18-71	91.10	95,800
MOULTON WEIR SPILL TO BUTTE BASIN	--	1935-	DWR	1-25-70 2-20-58	83.6 83.7	36,400(B) - -	12 -5-70	79.60	7,720(B)
COLUSA WEIR SPILL TO BUTTE BASIN	--	1935-	DWR	2- 8-42	70.4	86,000(B)	12 -5-70	66.71	44,200(B)
SACRAMENTO RIVER AT COLUSA	12110	1940-	USGS-DWR	2- 8-42	69.2	49,000	1-18-71	65.31	41,800
COLUSA BASIN DRAIN AT HIGHWAY 20	--	1924-	DWR	2-21-58	51.9	25,400(E)	11-30-70	48.31	2,530
BUTTE CREEK NEAR CHICO	147	1930-	USGS	12-22-64	14.1	21,200	3-26-71	7.20	6,080
BUTTE SLOUGH NEAR MERIDIAN	--	1968-	DWR	1-26-70	61.5(E)	152,000(E)	12 -6-70	55.20	35,300
SUTTER BYPASS AT LONG BRIDGE	--	1914-	DWR	3- 1-40	57.7	210,000	12 -6-70	49.04	- -
TISDALE WEIR SPILL TO SUTTER BYPASS	--	1940-	DWR	3- 1-40	53.4	25,700(B)	12 -6-70	49.13	13,500(B)
SACRAMENTO RIVER BELOW WILKINS SLOUGH	12926	1938-	USGS	1-26-70 3- 1-40	50.7 52.8	29,300 - -	1-18-71	48.47	27,600
SACRAMENTO RIVER AT KNIGHTS LANDING	14541	1921-39 1940-	USGS-DWR	1-26-70 2- 8-42	40.9 41.8(D)	30,800 - -	1-18-71	34.21	27,800
MIDDLE FORK FEATHER RIVER NEAR CLIO	686	1925-	USGS	2- 1-63	16.2	14,500	3-27-71	13.20	7,620
MIDDLE FORK FEATHER RIVER NEAR MERRIMAC	1062	1951-	USGS	12-22-64	26.5(A)	86,200	3-26-71	14.11	15,700
NORTH FORK FEATHER RIVER NEAR PRATTVILLE	493	1905-	USGS	3-19-07	16.2(C)	10,000	2-18-71	4.61	520
BUTT CREEK BELOW ALMADOR-BUTT CREEK TUNNEL NEAR PRATTVILLE	69	1936-59 1964-	USGS	12-23-64	5.9	3,830	3-26-71	2.53	780
INDIAN CREEK NEAR CRESCENT MILLS	739	1906-18 1930-	USGS	3-19-07	20.2(C)	25,000	3-27-71	11.63	8,930
SPANISH CREEK ABOVE BLACKHAWK CREEK AT KEDDIE	184	1933-	USGS	12-22-64	13.5	15,400	3-26-71	10.23	8,670
NORTH FORK FEATHER RIVER AT PULGA	1953	1910-	USGS	12-22-64	35.8	73,000(H)	3-26-71	21.04	21,900
WEST BRANCH FEATHER RIVER NEAR PARADISE	110	1957-	USGS-DWR	12-22-64	26.2(A)	26,300	3-26-71	13.62	6,990
FEATHER RIVER AT OROVILLE (BEFORE OROVILLE DAM)	3624	1894-67	USGS-DWR USWB	3-19-07 12-22-64	28.2 - -	230,000(C,P) 252,000(Q)			
FEATHER RIVER AT OROVILLE (AFTER OROVILLE DAM)	3624	1967-	USGS-DWR	1-25-70	15.3	56,300(N)	3-26-71	- -	7,720(N)
THERMALITO AFTERBAY RELEASE TO FEATHER RIVER NEAR OROVILLE	--	1967-	USGS-DWR	1-28-70	23.3	21,600	3-27-71	22.04	17,600
FEATHER RIVER NEAR GRIDLEY (BEFORE OROVILLE DAM)	3676	1929-67	USGS-DWR	12-23-55	52.2	- -			
FEATHER RIVER NEAR GRIDLEY (AFTER OROVILLE DAM)	3676	1967-	USGS-DWR	1-27-70	42.8	72,900	3-30-71	83.61	24,300
SOUTH HONCUT CREEK NEAR BANGOR	31	1950-	USGS	12-26-64	19.3	17,600	3-26-71	8.90	3,300

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CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
FEATHER RIVER AT YUBA CITY	3974	1943-	USGS-DWR	12-23-64 12-24-55	76.4 82.4	172,000 - -	3-26-71	53.04	- -(D)
NORTH YUBA RIVER BELOW GOODYEARS BAR	250	1930-	USGS	2- 1-63	23.8(A)	40,000	3-26-71	11.00	7,360
NORTH YUBA RIVER BELOW NEW BULLARDS BAR DAM	490	1940-	USGS	1-22-70 12-22-64	35.3 40.5(C)	56,200 91,600(M)	6-28-71	8.83	1,820
SOUTH YUBA RIVER NEAR CISCO	52	1942-	USGS	1-31-63	20.6(A)	18,400	6-26-71	9.08	3,370
SOUTH YUBA RIVER AT JONES BAR NEAR GRASS VALLEY	308	1940-48 1959-	USGS	12-22-64	25.0(A)	53,600	6-26-71	13.08	9,060
YUBA RIVER ENGLEBRIGHT DAM	1108	1941-	USGS	12-22-64	546.1	171,000(K)	3-26-71	515.30	15,000(BK)
DEER CREEK NEAR SMARTVILLE	85	1935-	USGS	10-13-62	13.8	11,600	3-26-71	9.20	4,520
YUBA RIVER NEAR MARYSVILLE	1339	1940-	USGS	12-22-64	90.2	180,000	3-26-71	69.89	18,800
BEAR RIVER NEAR WHEATLAND	292	1928-	USGS	12-22-55	19.3(C)	33,000	12 -4-70	15.35	12,400
FEATHER RIVER AT NICOLAUS	5920	1943-	USGS-DWR	12-23-55	51.6	357,000	3-27-71	38.87	44,900
FREMONT WEIR (WEST END) SPILL TO YOLO BYPASS	--	1934-	DWR	12-23-55	39.7	294,000(B)	12 -7-70	35.42	25,100(B)
SACRAMENTO RIVER AT VERONA	21257	1929-	USGS-DWR	3- 1-40	41.2	79,200	12 -5-70	34.00	63,200
SACRAMENTO WEIR SPILL TO YOLO BYPASS NEAR SACRAMENTO	--	1926-	USGS-DWR	3-26-28	32.8	118,000(BE)			NO FLOW
NORTH FORK AMERICAN RIVER AT NORTH FORK DAM	342	1941-	USGS	12-23-64	11.9	65,400	3-26-71	5.70	14,100
RUBICON RIVER NEAR FORESTHILL	315	1958-	USGS	12-23-64	55.4(AI)	- -	3-26-71	11.70	5,450
MIDDLE FORK AMERICAN RIVER NEAR FORESTHILL	524	1958-	USGS	12-23-64	69.0(AI)	310,000(I)	3-26-71	14.12	16,400
MIDDLE FORK AMERICAN RIVER NEAR AUBURN	614	1911-	USGS	12-23-64	60.4(AI)	253,000(I)	3-26-71	18.11	16,500
SOUTH FORK AMERICAN RIVER NEAR CAMINO	493	1922-	USGS	12-23-55	32.6(A)	49,800	3-26-71	14.14	5,100
SOUTH FORK AMERICAN RIVER NEAR LOTUS	673	1951-	USGS	12-23-55	21.4	71,800	3-26-71	10.83	11,100
AMERICAN RIVER AT FAIR OAKS (BEFORE FOLSOM DAM)	1888	1904-55	USGS	11-21-50	31.9(C)	180,000			
AMERICAN RIVER AT FAIR OAKS (AFTER FOLSOM DAM)	1888	1955-	USGS	12-23-64	21.6	115,000	1-15-71 0 0 0	9.73	8,270
SACRAMENTO RIVER AT SACRAMENTO	23530	1879-	USGS-DWR USWB	11-21-50	30.1(C)	104,000	12 -5-70	21.79	73,700
SACRAMENTO RIVER AT WALNUT GROVE	--	1929-	DWR	12-25-64	12.2	- -	12 -8-70	8.56	- -(D)
ADOBE CREEK NEAR KELSEYVILLE	6	1954-	USGS	12-22-64	9.1	1,500	12 -3-70	7.55	880
KELSEY CREEK NEAR KELSEYVILLE	37	1946-	USGS	12-21-55	12.8	8,800	12 -3-70	10.17	3,840
CACHE CREEK NEAR LOWER LAKE	528	1944-	USGS	2-24-58	9.4	8,000	1-15-71	7.62	4,420

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CENTRAL VALLEY AREA (CONTINUED)									
SACRAMENTO RIVER BASIN (CONTINUED)									
NORTH FORK CACHE CREEK NEAR LOWER LAKE	197	1930-	USGS	12-11-37	14.0(A)	20,300	12 -4-70	9.28	8,970
CACHE CREEK ABOVE RUMSEY	955	1960-	USGS-DWR	1- 5-65	21.4(A)	59,000	12 -4-70	14.46	17,900
CACHE CREEK NEAR CAPAY	1044	1942-	USGS	2-24-58	20.9	51,600	12 -4-70	13.96	16,800
CACHE CREEK AT YOLO	1139	1903-	USGS	2-25-58	85.4	41,400	12 -4-70	72.27	18,200
YOLO BYPASS NEAR WOODLAND	--	1939-	USGS-DWR	2- 8-42	32.0	272,000	12 -5-70	25.64	33,300
DRY CREEK NEAR MIDDLETOWN	8	1959-	USGS	2- 8-60	9.9	3,470	STATION DISCONTINUED		
PUTAH CREEK NEAR WINTERS	574	1930-	USGS-DWR	2-27-40	30.5	81,000	3-28-71	9.10	1,110
YOLO BYPASS NEAR LISBON	--	1914-	DWR	12-25-64	24.7	350,000(E)	12 -8-70	15.70	- -
SACRAMENTO RIVER AT RIO VISTA	--	1906-	DWR	12-26-55	10.2	- -(D)	11-30-70	8.32	- -(D)
SAN JOAQUIN RIVER BASIN									
NORTH FORK COSUMNES RIVER NEAR EL DORADO	205	1911-41 1948-	USGS	12-23-55	14.8	15,800	3-26-71	8.71	4,210
MIDDLE FORK COSUMNES RIVER NEAR SOMERSET	107	1957-	USGS	2- 1-63 2- 1-63	16.2 18.4(A)	11,800 - -	3-26-71	9.79	2,290
SOUTH FORK COSUMNES RIVER NEAR RIVER PINES	64	1957-	USGS	2- 1-63	10.9	5,540	3-26-71	4.70	1,400
COSUMNES RIVER AT MICHIGAN BAR	536	1907-	USGS-DWR	12-23-55 3- -07	14.6 16.3(A)	42,000 - -	3-26-71	7.97	8,590
COSUMNES RIVER AT MCCONNELL	724	1941-	USGS	12-23-55	46.3	54,000	3-27-71	41.85	8,320
COLE CREEK NEAR SALT SPRINGS DAM	20	1927-42 1943-	USGS	12-23-64	10.2	6,140	1-17-71	5.35	1,170
SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT	75	1933-	USGS	12-23-55	14.8(AC)	6,920	3-26-71	6.38	1,250
MOKELUMNE RIVER NEAR MOKELUMNE HILL	544	1901-	USGS	12- 3-50	18.5	33,700	6-27-71	11.49	12,600
MOKELUMNE RIVER AT WOODBRIDGE	661	1924-	USGS	11-22-50	29.6	27,000	12-13-70	12.14	1,440
MOKELUMNE RIVER NR THORNTON(BENSON FERRY)	2045	1911-	DWR-USWB	12-24-55	18.0(C)	- -(D)	12 -5-70	9.18	- -(D)
BEAR CREEK NEAR LOCKEFORD	48	1930-	USGS	4- 3-58	15.1	2,930	11-29-70	12.29	615
SOUTH FORK CALAVERAS RIVER NEAR SAN ANDREAS	118	1950-	USGS	12-23-55	10.3	17,600	12 -2-70	5.91	2,210
DRY CREEK NEAR GALT	329	1926-33 1944-	USGS-DWR	4- 3-58	15.3	24,000	3-26-71	13.26	2,960
MORMON SLOUGH AT BELLOTA	--	1948-	DWR	4- 2-58	20.7	15,400(E)	12-21-70	7.27	1,430
CALAVERAS RIVER NEAR STOCKTON	--	1958-	DWR	1- 6-65	12.6	760(E)	3-25-71	4.65	85
STOCKTON DIVERTING CANAL AT STOCKTON	--	1944-	DWR	4- 4-58	17.1(E)	11,400(E)	11-29-70	9.40	2,140
DUCK CREEK NEAR STOCKTON	--	1950-	DWR	12-24-55	5.8	400	STATION DISCONTINUED		
SOUTH FORK STANISLAUS RIVER NEAR LONG BARN	67	1937-	USGS	11-21-50	9.3	4,900	6-27-71	6.00	1,460

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CENTRAL VALLEY AREA (CONTINUED)									
SAN JOAQUIN RIVER BASIN (CONTINUED)									
STANISLAUS RIVER AT ORANGE BLOSSOM BRIDGE	--	1928-39 1940-	DWR	12-23-55	31.8	62,000	6-27-71	10.23	5,570
STANISLAUS RIVER AT RIPON	1075	1940-	USGS-DWR	12-24-55 2-12-38	63.3 64.4(A)	62,500 - -	6-28-71	48.97	3,480
SOUTH FORK TUOLUMNE RIVER NEAR OAKLAND RECREATION CAMP	87	1923-	USGS	12-23-55	10.9(A)	11,900	3-26-71	5.14	900
MIDDLE TUOLUMNE RIVER AT OAKLAND RECREATION CAMP	74	1916-	USGS	12-23-55	11.8(A)	4,920	5-16-71	4.36	440
TUOLUMNE RIVER AT MODESTO	1884	1940-	USGS-DWR	12- 9-50	69.2	57,000	1-15-71	44.24	3,070
ORESTIMBA CREEK NEAR NEWMAN	134	1932-	USGS	4- 2-58	6.6(C)	10,200	12-21-70	5.58	580
MERCED RIVER AT POHONO BRIDGE NEAR YOSEMITE	321	1916-	USGS	12-23-55	21.5(A)	23,400	5-16-71	7.63	3,420
SOUTH FORK MERCED RIVER NEAR EL PORTAL	241	1950-	USGS	12-23-55	18.7	46,500	5-16-71	8.80	2,120
MERCED RIVER NEAR BRICEBURG	691	1965-	USGS	12- 6-66	17.8	21,500	5-16-71	9.39	5,880
MERCED RIVER NEAR STEVINSON	1273	1940-	USGS	12- 5-50	73.8	13,600	12-22-70	61.04	1,280
CHOWCHILLA RIVER NEAR RAYMOND	202	1959-	DWR	2-24-69	586.4	13,760	12 -2-70	572.55	530
FRESNO RIVER NEAR KNOWLES	133	1911-13 1915-	USGS	12-23-55	11.5	13,300	12 -2-70	2.72	510
FRESNO RIVER NEAR DAULTON	258	1941-	USGS	12-23-55	12.6	17,500	12 -2-70	2.79	460
WILLOW CREEK AT MOUTH NEAR AUBERRY	130	1952-	USGS	12-23-55	28.5(A)	15,700	3-26-71	9.83	1,150
SAN JOAQUIN RIVER BELOW KERCHOFF POWERHOUSE NEAR PRATHER	1481	1942-	USGS-	12-23-55	51.0(A)	92,200	6-16-71	16.79	4,840
SAN JOAQUIN RIVER BELOW FRIANT	1676	1907-	USGS	12-11-37 6- 6-69	23.8(C,M) 11.7	77,200(M) 12,400	6-22-71	3.07	270
SAN JOAQUIN RIVER NEAR MENDOTA	4310	1939-	USBR-DWR	6- 1-52 6-20-41	- - 13.8	8,840 11,740(M)	8-17-71	4.26	540
EASTSIDE BYPASS NEAR EL NIDO	--	1964-	DWR	2-25-69	17.6	21,700	12-23-70	8.84	220
SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE	7615	1937-	USGS-DWR	2-26-69	68.1	9,180	12-23-70	58.83	860
SAN JOAQUIN RIVER NEAR NEWMAN	9520	1912-	USGS-DWR	2-26-69	65.9(A)	34,700(L)	12-23-70	53.05	2,030
SAN JOAQUIN RIVER NEAR VERNALIS	13540	1922-	USGS-DWR	12- 9-50 1-27-69	32.8(C) 34.6	79,000 52,600	12-23-70	16.69	6,700
KINGS RIVER BELOW NORTH FORK	1342	1951-	USGS	12-23-55	23.1	85,200	6-16-71	7.94	6,500
KAWEAH RIVER AT THREE RIVERS	418	1958-	USGS	12- 5-66 12- 5-66	16.7 19.0(A)	73,000 - -	5-16-71	6.31	1,830
TULE RIVER NEAR SPRINGVILLE	247	1957-	USGS	12- 6-66	19.7(A,C)	49,600	11-26-70	4.86	430
TULE RIVER BELOW SUCCESS DAM	393	1953-	USGS	12-23-55 11-19-50	21.7(C) 26.0(A,C)	27,000 32,000(M)	12 -2-70	6.02	510
KERN RIVER AT KERNVILLE	1009	1905-12 1953-	USGS	12- 6-66	19.3(A)	74,000	6-17-71	5.95	2,040

STREAM AND STATION	DRAINAGE AREA IN SQ MILES	PERIOD OF RECORD	SOURCE OF RECORD	PREVIOUS MAXIMUM OF RECORD			1970-1971 WATER YEAR		
				DATE	STAGE IN FEET	DISCHARGE IN CFS	DATE	STAGE IN FEET	DISCHARGE IN CFS
NORTHERN LAHONTAN AREA									
HONEY LAKE BASIN									
WILLOW CREEK NEAR SUSANVILLE	90	1950-	USGS	2- 1-63	5.6	820	1-18-71	4.88	510
SUSAN RIVER AT SUSANVILLE	184	1917-21 1950-	USGS	12-22-64	7.3	5,100	3-26-71	6.10	2,520
PYRAMID AND WINNEMUCCA LAKES BASIN									
LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR NEAR BOCA	146	1903-10 1939-	USGS	2- 1-63	9.0	13,300	9-11-71	2.23	620
TRUCKEE RIVER AT FARAD	932	1899-	USGS	11-21-50	14.5(A)	17,500	6-26-71	6.36	3,400
CARSON RIVER BASIN									
EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK	276	1960-	USGS	1-31-63	10.2	15,100	6-26-71	5.51	2,560
WEST FORK CARSON RIVER AT WOODFORDS	66	1900-07 1938-	USGS	2- 1-63	9.0	4,890	6-26-71	3.51	680
WALKER LAKE BASIN									
WEST WALKER RIVER BELOW LITTLE WALKER RIVER NEAR COLEVILLE	180	1938-	USGS	11-20-50	8.1	6,220	6-27-71	4.98	2,080
EAST WALKER RIVER NEAR BRIDGEPORT	359	1911-14 1921-	USGS	6-19-63	4.6	1,390	7-21-71	3.17	720
SOUTHERN LAHONTAN AREA									
MOJAVE RIVER BASIN									
MOJAVE RIVER AT LOWER NARROWS NEAR VICTORVILLE	514	1899-06 1930-	USGS	3- 2-38	23.7	70,600	12-21-70	4.01	130
MOJAVE RIVER AT BARSTOW	1290	1930-	USGS	3- 3-38	8.6	64,300			NO PEAK
MOJAVE RIVER AT AFTON	2120	1929-32 1952-	USGS	1-26-69	10.4	18,000	11-29-70	2.69	2

LEGEND

- USGS - UNITED STATES GEOLOGICAL SURVEY.
- USBR - UNITED STATES BUREAU OF RECLAMATION.
- USWB - UNITED STATES WEATHER BUREAU.
- USCE - UNITED STATES CORPS OF ENGINEERS.
- DWR - DEPARTMENT OF WATER RESOURCES.
- PG+E - PACIFIC GAS AND ELECTRIC COMPANY.
- A - FROM FLOOD MARKS.
- B - DISCHARGE OVER WEIR OR SPILLWAY.
- C - SITE OR DATUM THEN IN USE.
- D - DISCHARGE NOT DETERMINED, AFFECTED BY BACKWATER OR TIDE.
- E - ESTIMATED.
- F - FROM DWR TELEMETERING LOG.
- G - PRELIMINARY.
- H - INCLUDES FLOW THROUGH POWER PLANT.
- I - DUE TO FAILURE OF PARTIALLY COMPLETED DAM.
- J - GAGE HEIGHT REVISED.
- K - FLOW THROUGH POWER PLANT NOT INCLUDED.
- L - DISCHARGE AT LATITUDE OF GAGING STATION SITE.
- M - PRIOR TO CONSTRUCTION OF UPSTREAM DAM.
- N - INCLUDES FLOW THROUGH FISH HACTHERY BUT NOT UPSTREAM DIVERSION TO THERMALITO AFTERBAY.
- P - OBSERVED.
- Q - ESTIMATED PEAK INFLOW TO PARTIALLY COMPLETED OROVILLE RESERVOIR.
- • - PEAK OF RECORD.

NOTE:

THE ABOVE TABLE IS A COMPOSITE OF SELECTED STATIONS THROUGHOUT THE STATE OF CALIFORNIA AND THE DATA THEREIN IS TAKEN FROM USGS SURFACE WATER RECORDS, DWR BULLETIN NUMBER 130, AND UNITED STATES DEPARTMENT OF COMMERCE, WEATHER BUREAU, DAILY RIVER STAGE PUBLICATIONS.